

The Mining Journal AND ATMOSPHERIC RAILWAY GAZETTE,

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 576.—VOL. XVI.]

LONDON: SATURDAY, SEPTEMBER 5, 1846.

[PRICE 6D.]

MR. TIPPET'S SALE OF HALLENBEG MINE MATERIALS.
BY PUBLIC AUCTION, on Monday, the 7th day of Sept. inst., at Ten o'clock in the forenoon, at HALLENBEG MINE, near CHACEWATER, the following very

VALUABLE MINING MATERIALS.—VIZ.
1 STEAM-ENGINE, 66-inch cylinder (7-feet 9-inch stroke in shaft), with cast-iron beam, 3 boilers, about 42 tons, and the first piece of rod, cylinder and case, brass condensing work (nearly new).
2 WHIM-ENGINE, 18-inch cylinder (4-feet stroke in shaft), with boiler, about 7 tons, iron cage, &c.

Capstan and shears, with oak axle; cat-head; oak axle, with pulleys and sheaves, complete; capstan and cat-head ropes, 14-inch and under; whin ropes and chains of different sizes; several fathoms of pumps, from 19 inches down to 6 inches; working barrels, wind-borers, door and door-pieces, H and top door-pieces, stuffing-boxes and glands, plunger poles, &c.; several horse-wheels; a great variety of new and old iron, of various sizes; railroad ditto, with saddles and waggon; 2 anvils, 2 vices, several tons of cast-iron, flat and other rods, sheaves, sagged strapping plates, of various lengths and sizes; iron, from which, new and old rods, hand-saws, iron and other blocks, machine, horse, and wire kibbles, ladders, rollers, beams, scales and weights, dial and stand, a great variety of new and old timber, 3 head-stamps, 22-feet wheel, complete.

COUNTING-HOUSE FURNITURE, &c.
The above may be viewed on applying to the agents at the mine; and further particulars obtained on application to Capt. J. Lean, Camborne, or at the office of Mr. Tippet, in Fynder-street, Truro.

STEAM-ENGINE FOR SALE.—A CORNISH ENGINE.
Of 63-inch cylinder, together with all the WORKING GEAR, PUMPS, &c., and with or without boilers. Further particulars may be had of Mr. W. Taylor, C.E., No. 2, Dymor-place, Swansea.

STEAM-ENGINES.—From 8 to 20-horse power ENGINES
ALWAYS IN STOCK.
Apply to Mr. CAPPER, ENGINE-MAKER and FOUNDER, BIRMINGHAM.

TO BUYERS OF YELLOW OCHRE.—On SALE, a NEW
CORNISH OCHRE.—Samples may be seen at J. Ormerod's office, St. James's Chambers, Back King-street, Manchester.

BLACK JACK FOR SALE.—TO BE SOLD, BY TENDER,
at NANTERBOW CONSOLS MINES, in the parish of GWITHIAN, about FIFTY TONS of BLACK JACK, which may be seen, and samples obtained, on application to the agents on the mines.—Tenders for the same, stating the highest price per ton of 21 cwt., taken at the mines, will be received by Mr. G. J. Phillips, Camborne, up to the 14th Sept. next.—Camborne, August 24, 1846.

TO LET.—LEAD ROLLING MILLS, in LONDON, on the
Banks of the Thames, with all the requisite MACHINERY for sheet-lead and pipe-making furnaces, cranes, casting dials, &c., with 20-horse water-power. These mills are well adapted for any lead miner or merchant, having been at work for some time. The party is willing to give the whole of his connection to the person coming in.—Apply to H. Rains, St. Saviour's Mills, Dockhead.

CARMARTHENSHIRE.—TO BE LET, OR SOLD, several
SEAMS of ANTHRACITE COAL and IRONSTONE, lying under the farms of Kilney, New Inn, Foy, and Racebach, situate in the parishes of Llanelly and Llanelwedd, in the said county. If desirable, the surface will also be disposed of.—The above property is within a short distance of the Kidwelly Canal, and distant from Pembrey Floating Harbour, eight miles, where the present demand for coal far exceeds the supply. Further particulars can be obtained on application to Dr. Lawrence, Carmarthen, or to Mr. John Griffiths, Slach, Villa, near Brecon.—July 27, 1846.

MANAGER WANTED.—WANTED, in the UNITED
STATES OF AMERICA, about 100 miles from the city of Philadelphia, a PERSON qualified to SUPERINTEND the OPERATIONS of TWO BLAST-FURNACES, the COMBINATION of ORES, FLUXES, and BLAST; and also the working of a SMALL FORGE, REFINING and PUDDLING, and MAKING RAILROAD IRON.—A man of steady habits could depend on a permanent and respectable situation. The salary will be from \$1000 to \$1200 per annum, which may be increased after the first year, if the person is found to be satisfactory. Persons wishing such a situation, may direct letters (per steam-ship, post-paid) to Lindley Fisher, Beauveuve Post-office, Dauphine County, Pennsylvania; and may expect a reply in the course of two months.—Satisfactory references will be required.—August 14, 1846.

IMPORTANT TO ENGINEERS, MANUFACTURERS,
RAILWAY AND STEAM-BOAT COMPANIES.
Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their

IMPROVED ELASTIC METALLIC PISTONS.
THE PRINCIPAL FEATURE and ADVANTAGE of THIS IMPROVEMENT is—
1. Its great ELASTICITY and SELF-ADJUSTING PROPERTIES, which enable it to yield to any inaccuracy of the cylinder, whether oval or taper, and to move with the least possible friction.

2. Its extreme SIMPLICITY and LIGHTNESS, consisting of only two pieces of metal, having the vertical and lateral pressure in due and proper proportion, independent of each other.

3. It takes the LEAST possible SPACE, and is well adapted for air and water-pumps, as it allows of a larger water-way.

Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PACKING yet known, for the above reasons.

Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

ENGINEERS' BOLTS AND NUTS; BOILER and TANK MAKERS' and IRON

SHEPHERDERS' BOLTS, BOLTS, and COTTERS; and RAILWAY SPIKES,

FASTENINGS, BOLTS, &c.

ALEX. REID, 70, LOWER THAMES-STREET, LONDON,
begs to inform Engineers, Boiler and Tank Makers, Railway Contractors and Companies, that he can SUPPLY the ABOVE ARTICLES, warranted of best quality and unequalled workmanship, at lowest possible prices.—Any quantity supplied, at a few days notice, from the manufactory at Smethwick.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING
AGENTS, IRONMASTERS, and OTHERS REQUIRING FINE GREASE FOR MACHINERY and AXLES of every description.—JOSEPH FERRIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public.

References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

EMERSON'S PATENT CEMENT PAINT, PATENT CEMENT and PAINT MANUFACTORY, and STEAM-MILLS,
20, CREIGHTON-STREET, DUBLIN.

LOWER END OF TOWNEND-STREET, DUBLIN.
The PATENTEES have just completed their arrangements for the introduction of this VALUABLE and ECONOMIC PAINT. It is perfectly waterproof, and being in a liquid or paste state, may be applied at once from the cask, by any simple workman, with a common paint-brush—finishing it, as may be requisite, with water.

The surface to which it is to be applied needs no preparation, but to be clean and free from dust. It matters not whether the walls be wet or dry, its adhesiveness being such that it will cling to any surface—brick, stone, slate, tile, or Roman cement, and may be MADE OF ANY TINT or COLOUR, to suit the taste of the consumer—its present colour being that of a light creamy, or stone, colour.

To Roman cement it may be applied the day after it is put on the walls, and one small cask will cover a moderate-sized house.

It is particularly calculated for country houses, villas, &c., from its permanency and pleasing effect; also for lodges and entrances, as it does not absorb moisture; and, consequently, will preserve the walls as effectively as any cement.

FOR ROOFS.—All loose or vegetated mortar should be removed, then apply the paint, with a brush, stopping up all holes or crevices, which will cement the entire roof in one solid mass, so as to render it perfectly impervious to water for many years to come.

Sold at the manufactory, in iron-bound casks, containing 1 cwt., at 6s. 6d.; 2 cwt., 12s.; 3 cwt., 17s. 6d.

COMBUSTION OF COAL, CHEMICALLY & PRACTICALLY
CONSIDERED.
With coloured plates.
By CHARLES WYLLIAMS, Esq.
London: Simpkin, Marshall, & Co., and 7, Woburn—Birmingham: Wrightson & Webb.

PATENT IMPROVEMENTS IN CHRONOMETERS
WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street watch and clock maker, by APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufactory of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, and 1843. Silver lever watches, jewelled in four holes, 6s. each; in gold cases, from 25 to 410 extra. Gold horizontal watches, with gold dials, from 8s. to 12s. each.

DENT'S PATENT DIPLÉDOCOPE, or meridian instrument, is now ready for delivery. Particulars containing a description and directions for its use 1s. each, but to customers gratis.

MINE MATERIALS.—I. T. TREGELLAS, QUAT, TRURO
presents to MINERS, and begs to OFFER them the following GOODS, of good quality, and at the lowest market prices:—
Smith's Bellows
Grease, at the makers' prices
Fire Brick and Building Brick
Pipes, Tiles, and Roman Cement
Anvils, Vices, and Files
LEATHER
GRINDSTONES
ENGINE SHAFT and SUMP STRIPS
ONE DUCKS, POLYVALE, and SACKING
PATENT FELT, for covering cylinders, &c.
PATENT ROOFING FELT, 1d. per square foot
LITTING JACES
PATENT FUSE, SHOOTING NEEDLES, and
Clay hoes, and every other description
of materials for general mine consump.
Dated Truro, April 2.

BANWEN IRON COMPANY, GLAMORGANSHIRE.
Capital £100,000, in 10,000 shares of £10 each.—Deposit £2 per share.
Payable on complete registration; with two calls of £2 each, beyond which no further calls will be made.
(Registered Provisionally, pursuant to the 7th and 8th Vics, cap. 116.)

SAMUEL BOYD BARNETT, Esq., 17, Dorset-place, Dorset-square
SAMUEL KENTISH, LL.D., 11, Langtry, Carmarthen-shire
CLAUDIOUS ARMSTRONG, Esq., Fencible-Hill, Kidwelly
ALGERNON H. SWIFT, Esq., Crosby-hall Chambers, Bishopgate-street, Iron
FREDERICK FOWLER, Esq., Windsor
CHARLES FREDERICK PHILIPS, Esq., Adam-street, Strand
HOWLAND JAY BROWNE, Esq., Ynyarwed, Glamorganshire, and the Inner
Temple, London.—(With power to add to their number.)

Messrs. Spooner, Attwood, and Co., Gracechurch-street.
Solicitors.
William Martin Wilkinson, Esq., 44, Lincoln's Inn-fields.
Secretary.—Sydney Pottinger Harris, Esq.

The object of this company is to work the ironstone and anthracite coal of the best quality lying under 537 acres, (nearly one square mile) situate near to the Banwen mountains, 13 miles from Neath, and 16½ from Swansea, Glamorganshire, and in the immediate vicinity of the well-known Tynysswyn, Onllwyn, and other highly prosperous iron-works. The minerals, which have been surveyed by very eminent surveyors, and are proved by working in the adjoining properties to consist of four veins of coal, respectively of 4, 12, 6, and 3 feet in thickness, and veins of iron mine, amounting together to 8 feet in thickness, both the coal and iron mine crop out of the surface of the land; the coal will, therefore, be worked by level, and the mine by panning, without pits or machinery of any sort. There are cheap limestone quarries in the neighbourhood, from which the other works obtain their flux, and building stone and fire-clay are found on the property.

The estate is most favourably situated for transit, as by laying down rather less than a mile and a half of tramway (at an expense of £1800), the works will be placed in communication with the Swansea Canal, and the South Wales, Swansea Vale, and Vale of Neath Railways, and with the ports of Swansea, Neath, and Britton Ferry; there will, therefore, be the most ample means of transit to all parts.

It is proposed to erect six smelting furnaces, each 24 feet high, which will burn out at a low average of 14,000 tons of pig iron per annum, the cost of these (which may be completed within six months), with the necessary offices, including the expense of opening out the mine, the shares allotted to the lease for his interest under the lease, and a sufficient sum in hand as working capital, will not exceed £61,000, beyond which no calls will be made. From the coal and ore cropping out on the surface, the economy of patching and level working, and the facilities of procuring limestone, iron may be made (including wear and tear of the plant and works, and the expense of management) for 24. 10s. per ton, (see the prospectus and estimates); and reckoning a sale of the iron at 4s. per ton merely, (it is now worth upwards of 5s. per ton), the return would be above 35 per cent.; and as at the worst time anthracite pig has not sold at less than 3s., which would leave a net profit of 7000l., it follows that under any circumstances the return upon the capital must be very large, varying from 124 per cent. upwards.

It is quite unnecessary to touch upon the prospect of the iron trade, as the ordinary supply is only equal to the ordinary demand, and there is an additional demand of at least 3,000,000 tons (two years' entire stock) for English railways alone, hanging over the market. Indeed the dividend of 90 per cent., declared by the New British Iron Company at their last meeting (see the report in the Mining Journal of July 11, 1846), sufficiently shows the prosperity of the trade. The liability of shareholders will be limited by the deed of settlement, and by the incorporation of the company to the amount per share to be called up—viz: 6s. per share. For a more full detail see the prospectus and estimate, which may be had, where plans of the property and the minerals, surveyor's report and other documents are deposited, and are being distributed.

Applications for shares, with a reference to the usual form, may be made to Mr. T. Thomas, mining agent, 80, Old Broad-street; to the secretary, S. P. Harris, Esq., at the offices of the company, 23, Threadneedle-street; and to the solicitor, W. M. Wilkinson, 44, Lincoln's Inn-fields.

BANWEN IRON COMPANY, GLAMORGANSHIRE.—
APPLICATIONS for SHARES in this company will not be RECEIVED later than SATURDAY, the 12th inst.—immediately after which the allotment of shares will be made. By order of the directors, S. P. HARRIS, Secretary.

Offices, 23, Threadneedle-street, London, Sept. 3, 1846.

PRELIMINARY ANNOUNCEMENT.

WHEEL CURTIS COPPER MINING COMPANY, in the
PARISH OF CROWAN, NEAR CAMBORNE, CORNWALL.
In 6000 shares, of £2 each.—Deposit £1 10s. per share.

OFFICES.—GRESHAM ROOMS, BASINGHALL-STREET, 10.
In the present age of busy speculation, it may be deemed presumptuous to present another scheme to the attention of the public—a vast portion of which have been severe sufferers by the railway mania, and its consequent panic of 1845. The proprietors of the above mine have anxiously waited a favourable moment for their present announcement—content to let the game lie for long—stocking impossibilities, and a healthy condition of the money market succeed, before submitting a property, of the value of which they are assured, to the open stage of public opinion.

As one-half of the shares in this mine are held by the owners of the property, it is intended to allot 3000 shares among the best applicants, from which number a board of directors will be selected, to whom the full power of working the mine and allotting the shares, &c., will be committed. The directors shall be satisfactorily secured by the present proprietary from all unreasonable risk.

Parties of respectability will be furnished with full particulars, by application personally, or by letter (post-paid), to the offices, as above, where specimens of the ore may be seen, between the hours of Eleven and Four o'clock daily.

On behalf of the proprietors,
GEORGE PILKINGTON, Manager pro tem.

THE PATENT SAFETY FUSE,
FOR BLASTING ROCKS IN MINES, QUARRIES, and FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonials to its usefulness with which the manufacturers have been favoured from every part of the Kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, of

borne, Cornwall.

STEAM COAL—WITHOUT SMOKE, as per experiments
made at Her Majesty's Dockyard, Woolwich.

CAMERON'S COALBROOK STEAM COAL, and SWANSEA and LOUGHOR
RAILWAY COMPANY.—(Completely Registered and Incorporated.)
OFFICES.—2, MOORFAT-STREET, LONDON.

The directors are now prepared to supply steam ship companies, manufacturers, shippers, and others, with the company's steam coal, either at the company's wharf at Swansea, or in London. A statement, showing by comparative trial the superiority of this coal for steam purposes over every other, and a scale of prices, may be had on application at the company's offices here, or at their wharf at Swansea.—March 18, 1846.

IMPORTANT TO RAILWAY COMPANIES.
PATENT KAMPTULICON COMPANY, 18, CORNHILL.

This company having completed their new factory, are prepared to supply railway managers and contractors with an elastic material (perfectly non-absorbent) to place between the rails and sleepers, and between the frames and bodies of carriages, to prevent jarring, and, consequently, wear and tear. The elastic plank is strongly recommended to be used for the backs and sides of carriages, to prevent splinters when accidents occur.

By order of the board, P. G. GREVILLE, Secretary.

OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN.
J. MURDOCH (successor and late assistant to Mr. Hebert) informs INVENTORS and PATENTERS, that, at his OFFICE, they can obtain

REFERENCE TO A CLASSIFIED LIST OF PATENTS,
(THE ONLY ONE EXTANT), which shows at one view all the Patents ever granted for any particular object, whereby they may save much trouble and expense, and procure information not otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED.

SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms.

FINISHED and WORKING DRAWINGS executed with accuracy and dispatch.

JAMES LANE, MINING SHAREBROKER
75, OLD BROAD-STREET, LONDON.

JOHN HARVEY, SHAREBROKER AND ASSAYER,
LISKEARD, CORNWALL.

CHARLES THOMAS CRAPP, SHAREBROKER,
TAVISTOCK, DEVON.

WILLIAM TRENER, DEALER IN RAILWAY AND
MINING SHARES.—ESTABLISHED TEN YEARS.
OFFICES, No. 50, THREADNEEDLE-STREET, LONDON.

MESSRS. LINTHORNE, JONES, and CO., STOCK,
MINING, and SHARE AGENTS,
Every information will be afforded as to the markets and prices of the above, by application (post-paid) at their offices.

WILLIAM H. SMITH, MINING SHARE AGENT,
10, WARWICK-COURT, THEOLOGY-STREET.
SHARES in many valuable MINES FOR SALE, and every information will be afforded, on application.

WILLIAM FOX and SON, No. 53, CASTLE-STREET,
LIVERPOOL, have always on SALE PIG-IRON, RAILWAY BARS, CHAIRS, and IRON of every description.—TIN PLATES, WIRE, &c.

MINING OFFICES, No. 1, ST. MICHAEL'S-ALLEY,
CORNWALL.

Messrs. WATSON & CUELL have received instructions to PURCHASE SHARES in East Tamar Consols, South Tamar, Coplopp, East Bos, Allen, Stray Park, and Mary Ann Mines; and have FOR SALE, SHARES in all the best DIVIDEND MINES in Cornwall and Devon, paying from 18 to 20 per cent. per annum.

THOMAS P. THOMAS, MINE AGENT AND DEALER
IN RAILWAY AND OTHER SHARES.
No. 80, OLD BROAD-STREET, LONDON.

T. P. THOMAS, in returning his most grateful thanks to his friends for the support they have given him, begs to assure them, that, from his personal knowledge of the leading mining capitalists and adventurers in Cornwall and Devon, as well as the principal adventurers in London and in the country, he is enabled at all times to procure the earliest information as to the alterations in the different MINES, and has every facility for the PURCHASE and SALE of SHARES at fair market prices, without advertising what particular shares he is a buyer or seller of—considering such a mode injurious to his principal.

T. P. T. having lately returned from the county of Cornwall, and having personally inspected the underground workings of many of the mines, will be happy to give any information respecting them.

MINING OFFICES, REMOVED FROM 16, CORNHILL,
to 1, THREE KING COURT, LOMBARD-STREET.—MR. R. TREDENNICK (of Cornwall), having established PRACTICAL AGENTS and CORRESPONDENTS in every MINING DISTRICT, whereby he obtains early and accurate information respecting MINES, proffers his services to capitalists and adventurers in the PURCHASE and DISPOSAL of SHARES.

MINING PROPERTY.—CAPITALISTS who are disposed to
INVEST in CORNISH and FOREIGN MINES, will find the present opportunity very favourable for so doing. From large sums having been lately diverted from such investments for railway speculations, standard mines are now selling at prices that will pay the purchaser 20 per cent. per annum for his outlay. There are also other mines that are on the eve of paying dividends, which can be recommended with confidence. Applications to be made to Mr. JAMES HERRON, mining agent, No. 3, Adam's-cour, Broad-street, London.

TO MINING SPECULATORS.—THOMAS LITTLE,
MINE and SHARE BROKER,
begs to inform his friends, and speculators generally, that he has BUSINESS to transact in the following SHARES:—Wheal Concord, Devon and Courtney, Condurrow, South Basset, West Basset, Wheal Cleveland, Ting-Tang, Dolcoath, Hawkmoor, &c.—Address MR. LITTLE, HALL OF COMMERCE, LONDON.

FRANCIS PRYOR, MINE and SHARE BROKER,
COMFORD, GWENAP, CORNWALL.

F. P. returns his grateful acknowledgments for the kind and liberal support he has received from gentlemen connected with the mining interest of Cornwall, &c., and begs to announce, that he has now added to the above business, that of AUCTIONEER and APPRAISER, and hopes, by punctuality and strict attention to the interest of those who may entrust him with their favours, to merit support.

N.B.—Mines inspected, and every information given.
One-half the amount advanced on any goods consigned to him for sale, by auction. Dated Comford, July 22, 1846.

TINCROFT MINING COMPANY.—Notice is hereby given,
that a QUARTERLY GENERAL MEETING of the shareholders in this company will be HELD on Thursday, the 17th of September next, at 44, Finsbury-square, at 9 o'clock precisely.—London, August 26, 1846.

COMBARTIN and NORTH DEVON LEAD AND
SILVER MINES.—At the Annual General Meeting of shareholders, held at Combartin, on Wednesday, the 19th of August, 1846.

J. G. MAXWELL, Esq., in the chair.
The reports of the directors, auditors, and mining captain, as published in another column, having been read, a full statement of accounts was submitted, when it was resolved unanimously—

Moved by Mr. Wilkey, seconded by Mr. Young,
1. That the reports and account-current produced, be received, approved of, and a copy sent to each shareholder.

Moved by Mr. W. H. Thorne, seconded by Mr. Rowe,
2. That Messrs. Maxwell, Dorell, and Harris, be requested to accept their reappointment for the ensuing year.

Moved by Mr. Loveloy, seconded by Mr. Cole,
3. That Messrs. Avery and Cotton be requested to discharge the duty of auditors for the ensuing year.

Moved by Mr. Thorne, seconded by Mr. Avery,
4. That the thanks of this meeting be given to the chairman, for his able conduct in the chair.

J. G. MAXWELL.

CALEDONIAN RAILWAY COMPANY.—FIFTH IN-
STALMENT.—Notice is hereby given, that the directors of this company have made a CALL, for the Fifth instalment, of FIVE POUNDS per share, PAYABLE on or before the 30th day of Sept. next, at the offices of the undermentioned company's bankers:—LONDON.—Messrs. Matherman, Peters, Midford, Masterman, and Co., 35, Nicholas-lane, Lombard-street.

LIVERPOOL.—Messrs. Moss and Co.
MANCHESTER.—Sir Benjamin Heywood, Bart., and Co.
EDINBURGH and GLASGOW.—The Commercial Bank of Scotland, and the Edinburgh and Glasgow Bank.

Interest, at the rate of 5 per cent. per annum, will be charged on all calls not paid at that date.

No transfer of shares received at this office after the 3d September will be registered, until the call is paid, as the special notices will be sent to proprietors on the 6th Sept.

J. BUTLER WILLIAMS, Secretary.
Office, 139, Prince's-street, Edinburgh; August 26, 1846.

CORNWALL and DEVON CENTRAL RAILWAY.—
At a numerous MEETING of the shareholders of the Cornwall and Devon Central Railway, held pursuant to public advertisement, at the London Tavern, Bishopgate-street, on Wednesday, the 2d of Sept., 1846, the scrip-holders' committee, appointed on the 1st of August last, submitted a report, containing a copy of their correspondence with the committee of management of the company, and detailing the facts relating to the past management, and the present and prospective condition of the undertaking.

D. W. HARVEY, Esq., in the chair.
The following RESOLUTIONS were unanimously agreed to:—
That the report now read be adopted, and printed for distribution among the shareholders.

That a committee of five shareholders be appointed to carry out the recommendation contained in the report, and that Mr. D. W. Harvey, Mr. John Bigg, Mr. Archibald Boyd, Mr. C. Craddock, and Mr. Richard Cohen, form such committee, and that three members be a quorum.

That Mr. D. W. Harvey, Mr. Richard Cohen, and Mr. Archibald Boyd, form the finance committee, and that payments may be made by the signatures of two of its members.

That the deposit of shares may be made, or the contribution of 1s. per share paid on or before Wednesday, the 16th of Sept. inst.

That the thanks of this meeting be presented to the chairman and the other members of the committee, for their zeal and attention to the interests of the shareholders.

Sept. 2, 1846. D. W. HARVEY, Chairman.

CORNWALL and DEVON CENTRAL RAILWAY.
The committee of scrip-holders of the Cornwall and Devon Central Railway, appointed at a public meeting of the shareholders, held at the London Tavern, on the 3d of September last, beg to announce, that, pursuant to the recommendation contained in the report, and adopted by the meeting, the CONTRIBUTION of ONE SHILLING per share may be PAID to the chairman, on or before Wednesday, the 16th inst.

HALEY'S PATENT LIFTING JACK.

MANUFACTURED SOLELY BY
W. & J. GALLOWAY, ENGINEERS,
KNOT MILL IRON-WORKS, MANCHESTER.

The attention of parties who employ LIFTING JACKS, is respectfully requested to the superiority of the above over those hitherto in use. It will lift either at the top or below—having a claw, the same as the rack jack. Its parts are made in the most accurate manner—each working piece being engineered. Notwithstanding its superiority, in point of workmanship, and combining utility, safety, durability, and neatness, the cost is not more than that of the rack-jack, of rude manufacture. Amongst the advantages which it possesses, the following may be enumerated:—

1. It is about half the weight of the ordinary rack jack of equal power.
2. This is most important, as the ponderous nature of the rack jack is one of the main objections to it, requiring two, and often three, men to carry one of moderate power; whereas, one of the improved jacks (capable of lifting five tons), can be borne with ease by one man.
3. The handle (working similar to the rack jack) may be let go with the left hand; and although it has neither ratchet wheels or any other mode of securing it, it will not run back, but remains stationary, and quite safe.
4. Its parts are few, and simple (made entirely of wrought-iron, and case-hardened).

PRICES.

No. 2 also—	to lift 2 tons	£6 0 0
" 3 "	" 4 "	7 0 0
" 4 "	" 8 "	9 10 0
" 5 "	" 12 "	12 0 0
" 6 "	" 16 "	15 0 0

DOMESTIC BREWING—the PATENT CONCENTRATED MALT AND HOP EXTRACT, enables PRIVATE INDIVIDUALS TO MAKE FINE HOME-BREWED ALE.

WITHOUT EMPLOYING ANY BREWING UTENSILS.—It has only to be dissolved in hot-water and fermented.—Sold, in jars, at 1s. and 1s. 6d.; and in bottles, for 9 and 18 gallons ale, at 6s. 6d. and 12s. 6d. each, by the

BRITISH NATIONAL MALT EXTRACT COMPANY.

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OBSERVATIONS ON THE MORE RECENT RESEARCHES IN THE MANUFACTURE OF IRON.

BY DR. J. LAWRENCE SMITH, OF CHARLESTON, S.C.

[Continued from last week's Mining Journal.]

I next pass on to make a few remarks about the refining furnace used in the working of iron. In these furnaces the air is thrown by one or two tuyers, into a crucible filled with charcoal, into which the pig to be refined, along with scraps coming from previous operations, is placed in a certain relative position. The changes that take place by the reaction of the air upon the coal, is similar to what occurs in the lower part of the blast furnace—namely: the conversion of the oxygen into carbonic acid, which is immediately changed into carbonic oxide. The analyses of the gases taken from the centre of the furnace, prove that the transformation of the oxygen into carbonic acid corresponds to the position where the workmen constantly place the iron that is about to be forged, and this is just what we should expect, as it is the point of maximum temperature.

Ebelman states that the atmosphere which surrounds the melted iron, contains hardly a trace of carbonic acid, either in the blast or puddling furnace; this being contrary to the opinion which is generally admitted, that the decarbonization of the iron takes place by the action of the air during the melting of the pig, but it would appear that this reaction is attributable to the protoxide of iron covering the surface of the mass undergoing refining. In the second period of refining, in the puddling properly speaking, it is easy to deduce from the analyses of the gas, that there is oxidation of a considerable portion of the iron by the oxygen of the air thrown in at the tuyer.

Here, again much of the fuel passes off under the form of carbonic oxide, thereby causing considerable waste. Of late years a modification has been introduced into the refining furnaces, even when the waste gases from the blast-furnace are not employed; a modification by which none of the combustible is lost. A few words will suffice to explain how this is accomplished.

All the furnaces are modifications of the reverberatory furnace. The fuel is placed upon the grate A (fig. 2), and ignited by air thrown in from below the grate, by the bellows or otherwise. The air in traversing the ignited coal is first converted into carbonic acid, and then, if the bed of coal be thick enough, this last will be changed into carbonic oxide. As this, however, is generally not the case, a part of the carbonic acid passes beyond the upper surface of the fuel without having undergone a change, particularly if the blast from below has been strong and abundant. By this operation chamber B becomes heated, and a mixture of carbonic acid, carbonic oxide, nitrogen, and a little hydrogen, passed out of the flue C. The object of the metallurgist, however, is not to permit any carbonic oxide or hydrogen to escape combustion; but to endeavour to add to the heat of the furnace, that heat arising from the combustion of these two gases. This is readily accomplished by throwing in a second blast of air, through a number of small orifices just above the surface of the fuel, D; this blast to be regulated as required.

By this process we recreate, as it were, the maximum intensity of heat (which first shows itself at the lower part of the fuel on the grate, just where the air becomes converted into carbonic acid), and in the chamber B, where it is most wanted; for the amount of heat rendered latent by the reduction of the carbonic acid into carbonic oxide, is rendered sensible by the reproduction of the former.

The advantages arising from this method of burning the fuel are important. In the first place, the heat is diffused over a larger space, thereby heating more uniformly the metal, than when it is placed in the midst of the fuel. Again, fuel of the most inferior quality can be made use of; and as evidence of this, in some trials made at Audincourt, it was proved that the reverberatory furnace could be heated to whiteness by burning the gas, and the pig melted and puddled, when a mixture of charcoal dust and earthy matter was made use of as fuel.

Ebelman, whom I have so often quoted in these articles, and who has certainly made the best series of scientific researches upon the subject, says that instead of employing the action of air upon an excess of charcoal to produce the combustible gas, the vapour of water may to an extent be substituted, which produces, in contact with burning charcoal, carbonic oxide and hydrogen. The heat of the combustion of equal volumes of hydrogen and carbonic oxide is about the same, and it can be easily deduced that the decomposition of the vapour of water by the charcoal, determines an absorption of latent heat, equal to that which is produced by the transformation of the same volume of carbonic acid into carbonic oxide. The vapour of water alone passed through the ignited coal produces all the effects just mentioned, but the absorption of latent caloric is so great as to cause the operation to cease in a few minutes. By projecting, however, a mixture of air and the vapour of water through the coal, the operation is said to be carried on advantageously.

It was my intention to have remarked at length about the effects of the hot blast; but it is now so generally admitted, that the hot is to be preferred to the cold blast in reducing the iron from the ore, and bringing it to its most refined state, that anything on the subject at this time would be superfluous. All that is important to make known upon this subject, is the results lately arrived at by M. Scheerer, as to how it is that hot air produces such remarkable effects in the blast-furnace.

By calculations based upon his own experiments as well as those of others, he was led to the conclusion, that the most elevated temperature that charcoal could produce in burning in air is 2571° Cent., which is that at which platinum melts. This temperature is situated in the middle of the space upon which the air is projected, and it goes on diminishing towards the exterior, so as to form a space for melting; the centre of which is at 2571°, and the exterior at 1550° Cent. When the hot blast is made use of, the temperature of the centre does not change, but the portion heated to 2571° becomes more extended. The exterior of the mass that was at 1550° whilst using the cold air, acquires, when the hot blast is employed, a temperature as many degrees higher as there is difference between the temperature of the two blasts; for instance, if the temperature of the air be 280° C., that of the exterior of the heated mass will be 1830° C.—if 300° C., the latter will be 1850° C.

Thus, the influence that hot air exercises is to extend the space of fusion, which is twice as great with the air at 300° C. as it is when the air is at 0° C.

IMPROVEMENTS IN THE MANUFACTURE OF IRON.

[Specification of patent granted to Thomas Lever Rushton, Esq., of Bolton-le-moore, in the county of Lancashire, iron manufacturer, for certain improvements in the manufacture of iron.]—*Newton's Journal.*

This invention relates to the manufacture of malleable iron in reverberatory furnaces. The first improvement consists in mixing hammer slack, roll scale, red ore, calcined ironstone, or other oxide, in a pulverized state, with a proportion of finely pulverized charcoal, coke, or other suitable carbonaceous matter (which should be as free as possible from sulphur), and introducing the mixture into the furnace before, or along with, or immediately after, the charge of pig or refined iron. The mixture of ore and carbonaceous matter is turned over from time to time, until the iron is melted, and then they are worked together in the usual way. The patentee says, that this process is very similar to that described in the specification of a patent, which was granted to W. N. Clay, March 31, 1840; but, in the present instance, the proportion of carbonaceous matter varies from 17 up to (but not including) 28 per cent, by weight of the ore or oxide; whilst Clay's invention was confined to the use of not less than 28 per cent. The proportionate weights of carbonaceous matter and ore or oxide employed, within the above limits, depend upon the quantity of carbon and oxygen they respectively contain, the description of pig-iron used with them, and the amount of pig iron to be added to the mixture. The following proportions produce an abundant yield of excellent iron:—480 lbs. of No. 4 pig-iron, 84 lbs. of Lancashire hematite ore, and 20 lbs. of coke dust; if No. 1 pig-iron be used, a smaller quantity of carbonaceous matter will be required; but if the charge of No. 4 pig-iron be reduced to 420 lbs., the weight of ore or oxide should be increased 180 lbs., and the coke to 48 lbs.

The second improvement consists in the addition of clay, argillaceous ironstone, or other substance containing alumina, to the ores or oxides which produce iron of the quality termed red-short. The clay, or other substance used, should be ground fine and dried, before being mixed with the ore. A larger quantity of carbonaceous matter (generally above 28 per cent.) will be required for a given quantity of ore, than if no clay were used; for the clay, in addition to its capability of taking up the carbon, has a tendency to diminish the contact of the ore or oxide with the carbonaceous matter, and thereby prevent a complete decomposition. The proportion of clay will vary with the quality of the ore, but from 4 to 10 per cent. of the weight of the ore will be sufficient when operating on the Lancashire hematite ore. If too much clay be used, the tap cinder will be very sluggish, and the ball, when under the hammer, will emit continuous showers of dark red cinders; and if too little be employed, the iron will retain some of its red-short quality.

The third improvement consists in combining a portion of the tap or fine cinder of puddling and balling furnaces with a portion of clay, chalk, carbonaceous matter, and rich iron ore, or some of these substances, and manufacturing the mixture (either with or without pig or refined iron), in reverberatory furnaces, into malleable iron. The materials must be pulverized and dried

before being mixed together. The relative proportions of the different substances may be as follows:—150 lbs. of tap cinder, containing about 71 per cent of protoxide of iron, 150 lbs. of Lancashire hematite ore, 20 lbs. of pulverized Worsley fire-clay, 20 lbs. of chalk, and 100 lbs. of coke-dust.

With regard to the first part of this invention, the patentee says he does not claim to have discovered the manufacture of malleable iron in reverberatory furnaces, either with or without a portion of pig, or scrap, or refined iron, nor the advantage of pulverizing the ores and carbonaceous matter; but he claims the manufacture, in reverberatory furnaces, in the manner above described, of malleable iron, by means of ores and carbonaceous matter, mixed in proportions limited as before mentioned, and combined with a portion of pig or refined iron. Under the second improvement, he does not claim to have discovered the advantage of using a portion of clay or argillaceous ironstone in the manufacture of iron from certain ores, that having been previously done in the manufacture of pig-iron from such ores; but he claims the use of clay as an ingredient to be employed in a pulverized state, mixed with certain ores and carbonaceous matter—also, pulverized, for the manufacture, both with or without pig or refined iron, of malleable iron in reverberatory furnaces. With regard to the third improvement, he does not claim to have first applied a portion of tap or fine cinder or other silicate of oxide of iron with lime or carbonate of lime, and with iron ore, clay, and carbonaceous matter—all these having long been used in the manufacture of pig-iron; but he claims the manufacture of malleable iron from the combination of those substances, pulverized (both with and without pig or refined iron), in reverberatory furnaces, as before described.

IMPROVEMENTS IN THE SEPARATION OF METALS.

[Specification of patent granted to John Taylor, Esq., of the Adelphi, for improvement in separating metals from each other, and for certain combinations with other substance—being a communication.]—*Newton's Journal.*

This invention relates to the separation of silver from ores of metallic combinations containing that metal, which the patentee proposes to effect by either of the two following methods:—Firstly, by forming a chloride of silver, then dissolving it by any of the solvents hereafter mentioned, and afterwards precipitating the silver from the solution; or, secondly, by converting the whole, or as much as is practicable, of the silver, contained in an ore or regulus, into a sulphate of silver, by a process of calcination, and then dissolving the sulphate of silver in hot water—the other metals contained in the ore being rendered insoluble. The argentiferous materials, to be treated according to the first part of this process, may be divided into two classes: those containing sulphur, and those which do not contain sulphur. As regards the sulphurous material, if it be a regulus of copper or iron, the patentee prefers first to granulate it, by allowing it, when in a hot state, to flow into water; it is then calcined in a furnace similar to those used for calcining copper regulus, for from 12 to 26 hours, according to the nature of the regulus under operation and the quantity in the furnace; after which it is ground, and passed through a fine sieve: during the calcination a moderate fire should be kept up, sufficiently low to prevent the regulus from caking; and the material should be stirred every two hours. The object of this process is to evaporate a portion of the sulphur, and thus almost entirely prevent the caking of the material in the subsequent calcination. In the same manner, sulphurous ore, which it might be inadvisable to melt, from its being already sufficiently rich in silver, and needing no concentration, would be most advantageously treated by calcining it as above described, previous to grinding, in order to prevent the formation of lumps in the subsequent calcination.

The operation of calcining the ore or regulus, after the above treatment, is carried on in a simple reverberatory, calcining furnace; the heat, on the introduction of every fresh charge, should be moderate, and gradually increased to a bright red heat, approaching yellow; the operation generally lasts from two to three hours, and during this time the material must be constantly raked, for the purpose of thoroughly oxidizing the copper, iron, and other metals contained in the ore or regulus. The state of the material operated upon should now be tested, by withdrawing a small portion of it, and, while still hot, pouring water upon it; if the water is then colourless, the material has been sufficiently calcined; but if the water should be blue or green, the calcination must be continued. When the sulphates of copper and iron have been decomposed, chloride of sodium, or any other suitable chloride, is to be added, in the proportion of four or five parts of salt to one hundred parts of the substance treated; the heat of the ore or regulus should be reduced previous to the addition of the salt, in order to prevent too great evaporation and loss of chlorine; and on the salt being added, the material should be well stirred for some time, and a degree of heat maintained sufficient to cause the chlorine or muriatic acid to rise in almost invisible fumes, in which the material should be allowed, as it were, to soak. The material may now again be tested, to prove whether the calcination has been thoroughly performed, by withdrawing a small portion from the furnace, and pouring over it a hot saturated solution of chloride of sodium; if the solution, thus obtained, be clear and colourless, and becomes of a whitish colour when cold water is added, the calcination is complete; but if the solution is blue or green, the calcination must be continued. The operation may be hastened by stirring over the material in the furnace another half pound or pound of common salt for every hundred pounds of material; and the whole must be constantly stirred. So great is the affinity of silver for chlorine, that it has been found sufficient, in many instances, to take the material which has been calcined out of the furnace, and mix it with salt, while hot; and chloride of silver has been thereby produced.

If the ore or regulus does not contain any sulphur or other substance which it is necessary to volatilize or oxidize by the above calcinations, common salt, in the proportions before given, may be at once added, and the material placed immediately in the furnace, and treated in the manner above described, for producing chloride of silver, beginning from the point at which the common salt is added.

A chloride of silver having been thus formed, the ore or regulus is to be washed or lixiviated with a hot saturated solution of chloride of sodium or other suitable chloride, or with a solution of hyposulphate of soda, potash, or other alkali or earth, which will dissolve the chloride of silver, and thus separate it from the insoluble portions of the ore or regulus. From this solution the silver may be precipitated by any of the known methods—precipitated copper may be used with advantage for effecting this operation. If the material thus treated has been copper regulus, some chloride of copper will remain in the solution—as, also, if copper has been used for precipitation; in this case, the solution from which the silver has been precipitated may be introduced into vessels containing iron, free from oxide, and the copper will then be thrown down, together with any silver that may have remained in the solution; and the copper thus obtained may be employed for precipitating the silver, as above mentioned. If it be desired to economize the salt used in this process, the lixiviated residue may be washed, and the liquor preserved, together with that obtained from the precipitation; and, after being brought up to the point of saturation, it may be further again employed for the extraction of further quantities of silver.

The second part of this invention is carried out in the following manner:—If the material to be treated is a sulphurous ore or regulus, it is to be subjected to a preparatory calcination, as in the treatment of ore or regulus for forming chloride of silver; in fact, this part of the invention may be considered to begin when the ore or regulus has been finely pulverized, after its calcination. The ore or regulus is then placed in a calcining furnace, in which it is acted upon by a current of atmospheric air, and is kept constantly raked; this operation generally lasts about three hours, commencing at first with a moderate heat, and gradually increasing to a full red heat, approaching yellow. During the operation the state of the material must be constantly tested, by withdrawing a small portion from the furnace, and pouring water upon it whilst hot, or else hot water must be used; a few grains of common salt must then be added—and if the operation is not complete, the solution, which was at first green, will be changed by the salt to blue; when only a small portion of the silver has been formed into a soluble salt by the calcination, it will simply cloud the solution when the salt is added; but when the calcination is complete, the chloride of silver will be thrown down in thick white flakes on the addition of salt. The material, being now removed from the furnace, is lixiviated with boiling water, and the silver is precipitated from the solution by any of the known methods.

Sulphurous ore or regulus may also be treated in a calcining furnace, after being pulverized, without any previous calcination; in this case, a very slow heat must be employed for the first part of the process, during which time the sulphur, contained in the ore or regulus, undergoes combustion; when the combustion ceases, the process above described, for converting sulphuret of silver into sulphate, begins.

If it be desired to treat an ore by the sulphate process which does not contain any sulphur, and at the same time inadvisable to convert it into a regulus, a small portion of sulphur in any shape, such as sulphurous copper ore or iron pyrites, may be mixed with it, so as to afford sufficient sulphur to combine with the silver; and the ore may then be calcined as before directed—particular attention being paid to the test.

The lixiviating apparatus employed by the patentee, consists of a round tub fitted with a strainer, composed of a perforated disc of wood and a disc of basket-work, covered with linen; and tow is packed round the sides, between the strainer and the tub.

ZINC CHIMNEY-POTS.—Mr. G. Ewart, of the New-road, has patented some improvements in the manufacture of chimney-pots: his invention consists in constructing chimney-pots of two tubes, one sliding upon the other, and capable of being fixed at any desired height by the aid of thumb-screws and nuts, or by other convenient means. The material which the patentee prefers to use for making the chimney-pots is zinc, as it is durable, cheap, and light. The advantage arising from this invention is, that it gives the power of increasing the draft of a chimney by increasing its height. The patentee claims, as his invention, the mode, above described, of constructing chimney-pots, each composed of two parts or tubes, one sliding over the other.

DOWLS IRON-WORKS.—These works employ about 6000 people; they have 18 furnaces in blast, about 700 colliers, and 1000 miners—the former earning from 21s. to 25s., the latter 18s. to 20s. per week.

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—The lode in the 24 ft. level, west of the engine-shaft, is still very much the same—producing some saving work. The 18 ft. level end, west of flat-rod shaft, is improved; it now produces over 2 tons per fm.; we have intersected more of the lode in sinking the winze under the 12 ft. level west; it is now more than 2 ft. wide, and producing between 1½ and 2 tons per fm. The lode west of Nangle's shaft is improved; it now produces 2 tons per fm.; the lode in the same level, east of Nangle's shaft, is large, producing rather less than 1 ton per fm. At the adit end east no change; we are in very promising ground at Clon Mines—light clay slate, with branches of gossan through it. We hope to ship a cargo of lead in 10 days or a fortnight.—THOMAS ANCOVE: August 28.

BEDFORD UNITED.—At Wheal Marquis, there has been no lode taken down in the 80 ft. level east. The lode in the 70 ft. level east is 2 ft. wide, wide, producing good saving work; and in the stopes, in the bottom of this level, the lode is worth 15¢ per fm. At Ding-Dong there is no alteration. At Wheal Tavistock, the lode in Phillips's engine-shaft is 2 ft. wide, and very promising. The lode in the 47 ft. level west is producing a little saving work; and in this level east the lode is 2 ft. wide, composed of spar, muncie, and ore. There is no alteration in the 35 ft. level east. In the south engine-shaft we are carrying about 5 ft. of the lode, which is composed of gossan, iron, spar, and ore. In the adit level east the lode is 18 in. wide, gossan and spar. We weighed, at Morwellham, on Friday last, June ores, 94 tons 3 cwt., and sampled July ores, computed at 90 tons.—J. PHILLIPS: Sept. 1.

CALLINGTON.—Johnson's engine-shaft is sunk nearly 10 fms. below the 112 ft. level, ground favourable; at this level, driving both north and south, no lode has been taken down since last report. In the 100 ft. level, both north and south, we are opening ground that will set on tribute, at 8s. in the 1L, on the value of the lead. In the 90 ft. level north the lode continues productive, leaving ground that will set at a moderate tribute. In the 80 ft. level north the lode is producing silver-lead ores; the winze, sinking below this level, we expect to communicate with the 90 ft. level this week, the lode is not taken down. At the north mine, in the 90 ft. level, driving north, the lode is intermixed with fluor spar, and spotted with silver-lead ores, the ground is hard; in the south end we are opening tribute ground. In the 80 ft. level the lode is disordered; we have set a winze to sink in the bottom of this level, for the purpose of opening tribute ground, and ventilating the level below. In consequence to the east of the Holmush cross-course we have discovered the back of a lode, and broke some kindly stones of gossan.—J. T. PHILLIPS: August 31.

CARADON UNITED.—In cutting the plat on the south side of the shaft at the 30 ft. level, we have intersected a number of large loose branches, composed of gossan, spar, flookan, prian, and small portions of muncie, and occasional spots of copper, mixed with decomposed granite; these branches vary in width from 30 in. to 15 in., and have continued for 8 ft.—we have not yet driven through them; judging from the north wall, their underlay is about 18 in. in the fathom, from which I presume they are the same we met with in driving to cut the lode from the shaft, about 6 fms. south of the engine-shaft, which branches extended about 4 fms., and which were separated from the lode by a well defined wall; from the looseness of the ground, and the large flood of water issuing from the branches, I suppose they may be as wide as they were in the upper level, and have, therefore, reason to expect that we shall intersect the lode in about 2 fms. more, supposing its passing from the killas into the granite not to have altered its underlay. The lode, as seen on the south of these branches, was nearly 3 ft. wide in the upper level, and was, as I there stated, a regularly defined lode, separated from the branches by a north wall, and carrying a regular south wall—supposing the underlay to be unchanged on the lode to go down with the branches, we ought to intersect it in 2 fms., or more; but in the upper level the lode did not underlay quite as much as the branches. I could have wished that we had been able to drive a few fathoms further before writing; but thought it better to state the facts as they now are. We find the work very difficult; the ground being so loose, and the flood gossan the gravel into the hooks, rendering it needful to change them every few hours, and to close then the ground as we go. The moment any further change takes place, you shall hear; the north wall of these branches is about 7 ft. from the south perpendicular of the shaft—consequently, 23 fms. from the north boundary of the set; so that the branches containing their present underlay will not be out of the set for 90 fms. (at least) below the 30 ft. level.—W. PENROSE.

CONSOLIDATED TRETOIL.—There has been no lode taken down in Heawood's shaft since last report. In the 70 ft. level west the lode is 9 in. wide, producing a little ore; ditto east, the lode is 15 in. wide, good saving work. In the 60 ft. level, west of Williams's shaft, the lode is 9 inches wide, at present unproductive; in the 60 ft. level, east of Henwood's shaft, the lode is 1 ft. wide, producing some stones of ore. In the 50 ft. level, east of Henwood's shaft, the lode is 1 ft. wide, opening tribute ground; in the 50 ft. level east, on John's lode, the lode has not been taken down since last report.

GUBERT SILVER-LEAD.—We have just now concluded our monthly setting for September and pay for July month. The following is the appearance of the lodes in the different levels:—The ground in the engine-shaft at this time is harder than usual, owing to a capely floor of strata gone cross the bottom of the shaft. At the 25 ft. level, going west, the lode is 1 ft. wide, rather a hard spar, with muncie and stones of ore; going east, at this level, the lode is worth a ton of lead ore per fathom—very promising. At the 15 ft. level, going east, the lode is improving, having soft white spar, and rich stones of lead; going west here, there is a very promising end—lode worth about a ton of rich ore in the fathom, mixed in a beautiful sugary spar and soft ground, and within 9 ft. of the east of Falmouth Land; this end has (or the lode has) been very uncertain in its direction for several fathoms past, or we should have gone out of Capt. Oates' rights for some time. The prospects, however, in the low ground are very encouraging—and, indeed, I may say throughout the mine. We have broken we calculate, for the present month, about 20 tons, or thereabout.—RICHARD ROWE: August 28.

EAST TAMAR CONSOLS.—At Whitson, we have forked the water and cut down the ground in Hitchins's shaft, from the 46 ft. level to the 54 ft. level, to make room for our pitwork and whim kibble to work. I hope, in the course of a few days, to commence driving the cross-cut, to cut the lode at that level. At the 46 ft. level, south of Hitchins's shaft, the lode is 2 ft. wide—saving work. The 46 and 36 north are disordered by a slide. At Furzehill, Harrison's shaft is sunk 5 fms. 1 ft. below the 30 ft. level; the lode is 2 feet wide, fluor spar and lead—a promising lode. At the 30 ft. level, south of Harrison's shaft, the lode is 3 ft. wide—good work; this part of the mine is looking very promising.—B. ROBINS: August 31.

GREAT WHEAL MARTHA CONSOLS.—We have cut through the lode at the 60 ft. level east; and, although it is large and regular, it does not present a more favourable appearance than it has for several months past; and we have, consequently, suspended operations in the old mine. At the new mine the lode in the 40 ft. level, west of the cross-course, is 6 ft. wide, containing muncie, with stones of yellow copper ore; the slate on the hanging wall is light blue decomposing, and is traversed by numerous small veins of muncie, and rich copper ore, which are indications of a very promising character. The pitch in the back of this level is a little improved. The 30 ft. level has not been drained since we last reported upon it. The new engine-shaft is sunk 18½ fms. below the deep adit level. We shall sample a small parcel of copper ore next Friday.—J. PRINCE: T. PENALUNA: August 30.

GUNNIS LAKE.—At Chilworth, Bailey's engine-shaft is 12 fms. 6 in. under the adit level. The lode is without alteration.—W. RICHARDS: Sept. 1.

HANSON.—In reporting on these mines this week I beg to say, at Treza, Stainsby's engine-shaft is now under 22 ft. level 4 fms. 8 feet, in which the ground is good, and the lode is 2½ ft. wide, a kindly lode, with some ore. In the 22 ft. level east, on Stainsby's lode, the lode is 2 ft. 9 in. wide, a very kindly lode, 6 in. of which is a good branch of ore; in this end we have gone through 10 fms. of good grey ground. In the bottom of the 12 ft. level, on caunter lode, there is still a good branch of ore; a winze is now being sunk on it at 8s. from 20; no twerk.—Z. WILLIAMS: August 31.

HAWKMOOR.—The lode in the 15 ft. level, east of Hitchins's shaft, is 2½ ft. wide, composed of spar, muncie, and capel, with good stones of ore in places.—P. RICHARDS: Sept. 1.

HOLMBUSH.—Hitchins's shaft being sunk deep enough below the 120 ft. level for cutting plat and for a fork, we shall at once commence doing the same. The ground in the 120 ft. level south is still favourable for driving; in the same level driving east, the lode is 12 in. wide, and worth 6¢ per fm. In the 110 ft. level, west of Hitchins's shaft, on the north part, the lode is 10 in. wide, composed of muncie, spar, and spots of ore; in the same level driving south, the lead lode is 5 ft. wide, composed of prian, spar, and stones of lead. The lode in the winze, sinking below the 100 ft. level, west of Hitchins's shaft (on the north part), is 15 in. wide, and worth 12¢ per fm.; and is sunk 5 fms. below the 100 ft. level, which we hope to communicate to the 110 ft. level in about two months from this date. The 100 ft. level south, on the lead lode, is, for the present, suspended, and the men set to rise above the level, to communicate to the winze sinking below the 90 ft. level for ventilation; the lode in the rise is composed of spar, prian, and stones of rich silver-lead. In the 100 ft. level north, the lead lode is 3 ft. wide, producing stones of lead; the ground we have set on tribute, in the back of this level, is producing some very good lead, and the men are making wages. The lode in the winze sinking below the 90 ft. level is composed of flookan and stones of lead. We have not cleared out the 110 ft. level, east of Hitchins's shaft, to see the end, nor have we forked out the water to resume driving the 120 ft. level west from the winze, but hope to be able to do so in a few days. We weighed, at Calstock-quay, on Friday last, July ores, 105 tons 4 cwt. 2 qrs, and sampled August ores, computed 107 tons.—W. LEANE: Sept. 1.

KIRKCUDBRIGHTSHIRE.—The lead in the end, driving east, at Stewart's shaft, is not so large as it has been, producing now about 4 ton per fm., ground rather stiff—set this to-day at 6¢ per fm.; the end, driving west, has very much improved, producing 2 tons per fm., ground favourable—set this to drive at 3¢ 10s. per fm. Have commenced sinking Stewart's shaft with 9 men; the pent-house will be so adjusted at this level, as to admit the whim bucket to discharge the water and stuff direct from bottom, so that winze men in this case will be dispensed with. The lode in the adit end east is still in an unsettled state; the ground, however, is favourable for speeding—set this at 42s. 6d. per fm. The weather has been very fine, and am happy to say we are getting on well with our surface work.—J. BUZZO: August 21.

LANIVET CONSOLS.—Since our last report, we have confined our operations at the 80 ft. level, on the flookan part of the lode eastward, not being able to cut through it, on account of the great quantity of water issuing from it; in driving this end, we have intersected a cross-course, and the same we had in the level above, which disordered the lode; and, until we got a fathom or two clear from it, it did not make any regular course of ore—so we presume, we shall have to drive about 2 fms. to get clear of the cross-course, before we get into the same branch. In the 70 ft. level west, the leader on the north part of the lode is 2 ft. wide, saving work, improved since last report. In the 40 ft. level east, the leader part of the lode is about 1½ ft. wide, producing a small quantity of ore. The new shaft, on the north part of the mine, is still sinking in a soft kindly killas; we have intersected a lode here, underlaying north, composed chiefly of flookan, soft spar, and spots of lead; but from the underlie it will soon leave the shaft.—H. WILLIAMS; W. MICHELL: August 28.

MENDIP HILLS.—The lode in Stainsby's shaft has greatly improved since my last report; it is now 9 ft. wide, 3 ft. of which on the footwall consists of quartz, flookan, and a small quantity of lead, assuming a very promising appearance indeed; I last week set this shaft to sink 6 ft. deeper, and cut whim-plat (per bargain to nine men), to accomplish which I think will take from five to six weeks. At Barwell's shaft we are down 11 fms. below the 14 ft. level; at this point I have set the men to drive north, on Stainsby's lode (which will make a 25 ft. level); the lode at this place is about 5 ft. wide. We have not as yet communicated the 20 ft. cross-cut, driving west from new shaft, with the 20 ft. level, north of Somers's, but hope to do shortly; the lode in this end looks extremely well, composed chiefly of carbonate of lime, quartz, flookan, and stones of lead of good quality at times; from the present appearance of this end we may calculate on something good from this part at no distant period. On the whole, I never saw the mine looking more favourable than at present.—F. C. HANPUR: August 31.

PENTUAN WHEAL MARY.—I have inspected this mine, and I think favourable of it. On the back of the copper lode there is a fine gossan, as fine as can be seen, and a fine hall for an adit, I should say it would take some of the lodes 50 fms. deep. There is also a lead lode in the set, which the streamers have discovered searching for tin. From what I see of the mine, I consider it a very promising concern and well worthy a trial.—W. HOOPER: June 15.

PLYMOUTH WHEAL YEOLAND.—The south adit level has been driven 30 fms. since the last meeting—there is no lode yet but in this level; it is now driven 20 fms. beyond the place pointed out to us, but I believe the lode is still 8 fms. at least further ahead. The north adit has been driven about 14 fms.; the south lode of the two seen at surface is cut; it is about 2½ ft. wide, is composed of capels and spar, spotted with copper and muncie. There is a lode (on which we have sunk a shaft, and broke some good work for copper) 7 or 8 fms. further north; this will be cut in about a month from this time; this is the most promising lode yet seen, and I hope, from its appearance in the shaft, will turn out well when cut in the adit.—R. EDWARDS: August 27.

TAMAR SILVER-LEAD.—The engine-shaft is sunk to the 160 ft. level, and we have commenced driving south at this level. In the 145 ft. level the lode is 1 ft. wide, work of a coarse quality. In the 135 ft. level the lode is 2½ ft. wide, good saving work. In the 125 ft. level the lode is 9 in. wide, composed of can and ore, work of a good quality. In the 115 ft. level the lode is still about 6 in. wide, producing a small quantity of ore. In the 105 ft. level the lode is 18 in. wide, composed of capel, with occasional stones of ore. In the winze, in the bottom of the 185 ft. level, north of the shaft, the lode is 1 ft. wide, producing some ore, but not rich. Some of our pitches are turning out very well indeed. We expect to sample on Wednesday, the 3d Sept., about 110 tons of rich silver-lead ore. At the north mine, the engine-shaft is sunk 3 fms. below the 60 ft. level. At Wheal Hancock, we have driven east, at the 20 ft. level, 4 fms. 1 ft. 6 in. At Holes Hole, the whim-shaft is down 18 fms. from surface. In the adit we intend to cut a little further east, to see if there is any more lode to be discovered.—JAMES SPRAGUE: August 31.

TAVY CONSOLS.—In excavating the wheel-pit we have recently cut another lode, about 2½ ft. wide, composed of gossan, and black, grey, and yellow ore—it is as promising a lode as can possibly be seen. On Williams's lode, the adit level west is still hard; there is some ore, but not in any quantity. In the 12 ft. level we have not got the north wall, although we are carrying it from 4 to 5 ft. wide; there is a leader of ore to the south, about a foot wide, nearly solid; the remainder of the lode is ore, muncie, and spar. The ground in Mary's shaft is still very hard. We are progressing with the smiths' shop as fast as possible, the masonry is nearly completed.—A. W. MARTYN: August 31.

TINCROFT.—I have nothing particularly new to report in the north mine since my last. The ground in the engine-shaft continues much the same, with some branches containing copper ore passing through it. The lode in the 90 east is large and kindly, with some spots of ore; the lode in the same level west is also large, producing some copper ore. The lode in the 80 east is 2½ ft. wide, producing some tinstuff; the lode in the 80 west is 2½ ft. wide, worth 12¢ per fm.; the lode in the winze, sinking on this end, is 2½ ft. wide, worth 10¢ per fm. The lode in the 70 east is very large, producing good work for tin, worth 10¢ per fm.; the lode in the winze, sinking below the 60 west, is 2½ ft. wide, producing some good quality ore, and very promising. Our tribute department continues much the same as for some time past. At Palmer's, no alteration in the shaft. The 70 west, on East Pool lode, is improving, now worth about 10¢ per fm.; the lode in the winze to the west, in the bottom of the 60, continues large, worth from 10¢ to 15¢ per fm.; the pitches continue to yield fair quality work. The new shaft is now down about 28 fms.; the ground continues favourable for sinking. In the south mine the lode in the stopes to the east of engine-shaft, in the bottom of the 152 ft. level, is 3 ft. wide, worth 25¢ per fm.; the stopes to the west of the shaft is worth about 12¢ per fm.; the 152 west is worth 20¢ per fm. The lode in the 142 east is large—poor at present, being in a very disordered state. The lode in the 120 east is 2 ft. wide, worth about 5¢ per fm. The lode in the 110 ft. level east is 3½ ft. wide, worth 10¢ per fm. The stopes in the 100 ft. level, on south lode, is worth 80¢ per fm.—we have one pitch working at 2s. 6d. tribute in the bottom of the 100 ft. level, where the men are making fair wages. We hope to get Wheal Providence engine to work in eight or nine days; on the whole, our prospects continue very encouraging.—W. PAUL: August 31.

UNITED HILLS.—At the 90 ft. level, in the eastern end, the lode is 2 ft. wide, ore throughout, of average quality; in the western end the lode is 2½ ft. wide, good ore. In the 80 ft. level, eastern end, the lode is 3 ft. wide, coarse in quality; in the stopes the lode is 3 ft. wide, ore of good quality. In the 70 ft. level, east of eastern shaft, the lode is 1 ft. wide, producing some good stones of ore; we are still driving north, west of James's shaft. In the 50 ft. level the ground is favourable for driving. In the 60 ft. level the lode is 3 ft. wide, ore throughout, of low quality; in the shallow adit the lode is 8 ft. wide, 18 in. ore of average quality. At Wheal Charles, at the 50 ft. level, the lode is 18 inches wide, coarse in quality. In the 40 ft. level the lode is 3 ft. wide, 2 ft. ore of average quality. At Wheal Sparrow, in the 40 ft. level, the lode is 1 ft. wide, poor. In the 30 ft. level, west of Turner's shaft, the lode is 2½ ft. wide, 15 in. ore of fair quality. We have commenced driving east of the winze; the lode is 18 in. wide, 1 ft. ore of average quality.—THOMAS TREVENEN; ROBERT WILLIAMS: September 1.

WEST WHEAL JEWEL.—In the 115 ft. level east, on Wheal Jewel lode, the lode is 1 ft. wide—no alteration in size or appearance since our last report. In the 100 ft. level west, on the same lode, the lode is 9 in. wide, still unproductive—ground very hard for driving; in the 100 ft. level east, on the same lode, the lode not taken down in the past week. In the 85 ft. level west, on the same lode, the lode not taken down in the past week. In the 12 ft. level west, on Tolcarne tin lode, the lode is 2 ft. wide, and worth 28¢ per fm. In the 12 ft. level east, on the same lode, the lode is worth 5¢ per fm. In the winze sinking in the bottom of the deep adit, west of Hodges's cross-course, on Tolcarne tin lode, the lode is 2½ ft. wide, and worth 8¢ per fm. In the winze sinking in the bottom of the deep adit, west of old sump-shaft, on Tolcarne tin lode, the lode is worth 6¢ per fm.—R. JONES: August 31.

WHEAL LOUISA.—Our sampmen are engaged in casing and dividing the shaft. We hope to resume sinking by to-morrow (Wednesday) evening. The present appearances are as last reported.—J. CHYNSWORTH: Sept. 1.

WHEAL TRELANEY.—Our sampmen have commenced cutting a plat at the 42 ft. level. The lode in the 32 ft. level, south of the shaft, is 2½ ft. wide, and worth 16¢ per fm.; in the same level north, it is 3 ft. wide, and worth 20¢ per fm. In a winze sinking under the 22 ft. level, south of the shaft, the lode is 2 ft. wide, and worth 10¢ per fm.; in the winze, under the 22 ft. level north, it is 4 ft. wide, and worth 25¢ per fm.; in the 22 ft. level north, the lode is 3 ft. wide, and worth 24¢ per fm. The lode in the 12 ft. level north, is 3 ft. wide, and worth 16¢ per fm.—P. CLYMO, Jun.: Sept. 1.

FOREIGN MINES.

IMPERIAL BRAZILIAN.—Gongo Soco, June 13.—We continue to obtain small quantities of gold for the washing-house from the shallow level near Harris's shaft; the other parts of the mine have undergone no alteration. At Catta Preta, the lode in the 10 ft. level, near Thomas's shaft, is of variable size, from 3 to 6 ft. wide, and shows tolerably at the stamps. We have found it impossible to continue the 18 ft. level, and it has, therefore, been abandoned.

The new shaft goes down well; but I daily look to our being stopped there also, when the captains and myself are unanimous in thinking further trials useless. We have commenced the erection of an additional number of stamp heads, that the water wheel may be fully employed in crushing the large heap of rubbish, which contains gold enough to pay for extraction. This will be ready in a week or 10 days, by which time I fear we shall have to reduce our force there to about a dozen labourers, two Englishmen, and a captain—a force equal to do all the proposed work in three or four months.—W. J. HESWOOD.—Gold Workings—From 3d to 18th June, 10 days, 7 lbs. 8 ozs.

NATIONAL BRAZILIAN.—Cocao, June 2 and 12.—Our mine has now been made in good working order, and the appearance of our stopes is very favourable indeed, as well as the lode in the end west of Oxenford's stopes. Our works generally have been carried on with much spirit, except our carpentry works, which is a little behind-hand, caused by the absence of the Brazilian carpenters, so many saint's-days having fallen in during the last month; notwithstanding, we are getting on well with the new stamping mill. All the axes required are on the mine, and cleaned up; nearly all the frame timber and stands are on the mine. The tram road, from the entrance of the mine to the new spalling floors, has been laid down—the stands for the new trip at the spalling floors have been put up, and the iron for coating the roads nearly completed. I think the road will be finished about the middle of next week.—Produce, 3 lbs. 2 ozs. 1 dwt. 63 grs.

ST. JOHN DEL REY.—Morro Velho, June 8.—Produce for May, 13159 oits; plus from Cata Banca, 350 oits.—13509 oits, equal to 12978 lbs. troy; the 13159 oits. are from 2955 tons of ore, equal to 4462 oits. per ton; 301 tons were rejected during the month. The Morro Velho produce is not a bad one, viewing the ground stoped over; the separate stamping from the United Mines has yielded 4677 oits. per ton, which is nearer one oitava poorer per ton than the corrected yielding of the previous month, when it was 566 oits. per ton—thus you see how impossible it is to equalise the produce from this section of the workings in two consecutive months. In practice, only one year's steady working all over the stopes to the same depth can be compared with any advantage with another year's working, or only results obtained in such manner are of any use for comparison. Mine Report.—The East Cachoeira is getting down by degrees, and Capt. Treloar expects to turn the corner before the end of June; looking at the tracings, I should almost doubt this, but the work is never relinquished day or night. Capt. Treloar is now anxiously engaged in the consideration of the best means of modifying the pumping machinery in the Bahu, previous to the erection of the new and more powerful 40 ft. wheel. Cost for May, rs. 33957 588.—This is very heavy cost. Of this cost, timber and cart hire for timber stand at rs. 3690 576, which I must endeavour, with all due precaution, not to affect the permanent supplies to diminish; rs. 759 880 is for steel purchased in Rio, and rs. 217 800 for steel bought in Sabara; and rs. 2680 724 is the amount of invoices from England—making a total of rs. 7338 480, not of extra, but over supplies, so far as respects the current expenditure. Received per packet, 261 lbs. 7 ozs. 11 dwts. 5 grs. gold.

COMBIMARTIN AND NORTH DEVON LEAD AND SILVER MINES.

At the general annual meeting of shareholders, held at Combimartin, on the 19th of August, J. G. MAXWELL, Esq., in the chair.

The following reports and account current were presented:—

Directors' Report.—Our operations upon the main lode, have been very much retarded during the past 12 months, by the dilapidated state of the old adit, and the consequent draining of the mine up to the 27 ft. level. These causes, combined with the extreme wetness of last winter, compelled us to suspend all workings upon the main lode, during the months of January, February, March, and April; and the delay necessarily attendant upon the above circumstances has rendered our situation at present much less favourable than we had fair reason to anticipate when we last met you. Notwithstanding, however, our inability to avail ourselves of any portion of the ore which has gone down in our old and productive lode, we have succeeded in disposing of 285 tons 5 cwt. 1 qr., of different descriptions of ore, realizing the amount of 35687. 3s. 8d.; this sum, together with the amount of a call of 1¢ per share, made in November last, has been entirely appropriated towards carrying on the works of the mine. From Harris's lode, we have raised, since the commencement, about 35 tons of good ore, and expect to make further returns immediately. From the Gorwell's lode, we have returned no ores at present; the appearances on this lode are by no means favourable. We have commenced clearing some extensive old workings towards the north of Newton's shaft, situated upon sets, which, until lately, we had not been able to secure; our captain reports favourably of the appearance of the lode in that direction. The value of the ores now at grass amounts to about 200¢. The ores sold during the past year, have realized prices considerably higher than those obtained previously to the establishment of the Combimartin Smelting Company.—1988 shares responded to the last call of 1¢ per share, leaving only 5 unpaid, upon which we have, in accordance with the rules of the company, declared to be forfeited—their numbers are 196, 197, 198, 199, 200. We have purchased landed property available for the convenience of the mine, to the amount of 1677. 10s. The whole of the ore at Nap Down, having been worked out, and the nature of the ground there having become very unfavourable for its production, we have deemed it advisable to abandon that set.—Our agents still continue to afford us every satisfaction.

The following report from Capt. R. Morcom, was then read to the meeting:—

Since our last general meeting, Vivian's shaft has been sunk 9 fms. 1 in., and we have risen 6 fms. 3 ft. 9 in., which completed this shaft to the 87 ft. level; we have also sunk this shaft 14 fms. 4 in. under the 87 ft. level, with the intention of carrying it to the depth of 15 fms., previously to driving a cross-cut to take the lode; but in consequence of a great and sudden influx of water from the bottom of the shaft, we have been obliged to suspend operations in the shaft, until the pressure engine can be applied to draw off the water, which it will take about a fortnight from this time to effect. We have about 25 fms. east to drive before we shall meet the lode. We have cleared and secured the old adit which is driven 53 fms. on the course of the lode, north of Newton's shaft, and have risen 17 tons of rich ore on it, above the back of the adit. We have to extend this level about 85 fms. more to the northward, when it will form a junction with Harris's lode; at which point we are warranted in expecting a great improvement. In the 27 ft. level, on Harris's lode, has been driven 22 fms., and a winze sunk under it 4 fms. in depth; we have had some good ore in this winze, but it is poor at present; there is a great deal of ground left to be taken away, between the 27 ft. level and the adit, part of which will be set on tribute. Place's shaft has been sunk 21 fms. to the 27 ft. level, and we have cleared and secured the 12 ft. level south 54 fms., which brought us to the extent of the old men's workings—the lode in the end is composed of flookan and soft spar. We have risen 6 fms. in the back of this level, and have about 2 fms. more to rise to meet the bottom of the old workings which have been sunk under the adit, when this is completed we shall be enabled to ascertain correctly the state of the lode in this part of the mine. The 37 ft. level has been driven 50 fms. south of Thorne's shaft, on the course of the lode which is made up principally with muncie, spar, and white iron. We have cleared and secured about 400 fms. of the main adit, and have let go the water out of the mine; we found it to be a very difficult and dangerous undertaking.

Nap Down.—We have sunk a winze 5 fms. under the 40 ft. level, and have driven on the course of the lode at the bottom of the winze, 2 fms. 2 ft.; we have had no ore for the last 3 fms. in sinking the winze, and none in driving the level. In consequence of the hardness of the ground and poverty of the lode, together with other unfavourable appearances, I consider that it will not warrant any further outlay.

The auditors' report, signed by Messrs. W. Avery, and G. K. Cotton, stated, that they had examined the accounts of the Old and Nap Down Mines, from August 1845, to July 1846, and found errors amounting to 47. 11s. 7d.—in favour of company 12s. 3d., against company 81. 19s. 4d.—which have been carried to the debit and credit of the several parties. They report a balance in favour of company in the hands of bankers, to the amount of 5957. 6s. 10d. The working expenses during the year had been 4511. 17s. 11d.; bankers' charges, for interest and discounts, 687. 17s. 11d.; balance due bankers, at last account, 5307. 1s.—51107. 16s. 10d.—The sales of ores during the year had been, 285 tons 5 cwt. 1 qr., producing 35687. 3s. 8d.; by call of 1¢ per share, made Nov. 5, 1845, 19387.—55067. 3s. 8d.—showing the balance in hand, of 5957. 6s. 10d. The resolutions passed will be found in our advertising columns.

CRADDOCK MOOR.—At a two-monthly meeting, held at Liskeard, on the 26th August, the accounts—showing balance against the mine, of 2137. 10s. 5d.—were allowed and passed, and a call of 30s. per share made.—The following report from Capt. J. Nance, was read to the meeting:—In the past two months the north shaft has been sunk 3 fms. 4 ft., and the south shaft 8 fms. 4 ft. 6 in.; the present price for sinking in each shaft is 24¢ per fm. The lode in the south shaft, consists of quartz and peach, spotted with ore. There are also near the lode, and parallel with it, small veins of ore in the granite. In the north shaft, the lode is about 12 in. wide, all good saving work. The character and quality of this lode are very much improving, as we are exploring it in depth.

GONAMENA.—At a two-monthly meeting of adventurers, held at Liskeard, on the 26th August, the accounts—showing a balance against the mine of 97. 4s.—were allowed and passed, and a call of 2¢ per share made.

LARKHOLES.—At a two-monthly meeting of adventurers, held at Liskeard, on the 27th of August, the accounts—showing a balance against the mine of 197. 10s. 3d.—were allowed and passed, and a call of 10s. per share made.

NORTH UNITED MINING COMPANY.—At a meeting of adventurers, held on the 18th August, the accounts were exhibited—showing a balance against the mine, of 1697. 11s. 4d.—which were agreed to, and a call of 6¢ per share made. The following report from Capt. N. Hocking was read to the meeting:—“Since our last meeting, we have driven east of the engine-shaft at the 80 ft. level about 7 fms.; this end is 10 fms. from the shaft, and we expect in 10 fms. more to cut a north and south lode. We hope when these come together at this level they will make something good. The lode in the end at present is in two

branches, east branch composed of iron and black oxide of copper, but not anything to save. The ground in this end is from 42 to 44. 102. per fm. In our 30 fm. level, we have driven south of the engine-shaft 21 fms. We expect in 9 fms. more to cut the east and west lode. On the north lode, at the 75 fm. level west of the shaft, in cutting open the north side, we discovered several small branches of rich grey copper ore with some crystallised ore among it, this is about 10 ft. long; the ground is impregnated with copper for 18 in. wide, but it is best going down. The lode in the end is small but ore, and the ground is not so hard as it was; we have paid 9s. 9d. per fm., now set for 6l., and have sunk the shaft 5 fms. below the 75 fm. level; the lode in the shaft is from 12 to 15 in. wide, impregnated throughout with grey copper ore; we are saving the best of it. At the 60 fm. level, we have driven north about 19 fms.; here we are expecting every fathom to cut some other lode. There is more water coming out of this end than ever it did before. This, we believe, is an indication of a lode not far off. The ground in this end is about 3l. per fm.

SOUTH ST. GEORGE.—At a meeting, which took place on the mine on Tuesday last, the costs and merchants' bills amounted, for July and August, to 370l. 5s. 3d., whilst there were no proceeds. It was decided that the working of the mine should be discontinued, and that the materials should be sold forthwith.

SOUTH YKOLAND.—At a two-monthly meeting, held at Liskeard, on the 27th August, the accounts—showing balance in pursuer's hands of 15l. 3s. 8d.—were allowed and passed, and a call of 1l. per share made.—The following report from Capt. T. Trelense, was read to the meeting:—During the last two months, for want of surface water to drive the pressure engine at the rate required, we have not been able to do any work below the 30 fm. level, where we are driving two ends on the course of G lode. The 30 east is driven from Croker's shaft about 35 fms., and the lode consists principally of peach, quartz, and munda, varying in width from 1 to 3 ft. The 30 west is extended from Croker's shaft about 15 fms., and lode somewhat similar in character to that in the eastern end. We have again connected the bottom lift to the engine, and forked the water under the 30 fm. level about 5 fms., and hope again soon to recommence operations at the 50 fm. level.

TOKENBURY MINE.—At a two-monthly meeting, held at Liskeard, on the 27th Aug., the accounts—showing balance against the mine of 105l. 18s. 2d.—were examined and passed; and a call of 4l. per share made.—The following report from Capt. Trelense, was read to the meeting:—The 65 fm. cross-cut is extended south from Crouch's shaft about 20 fms.; and, according to a rough calculation, about 44 fms. farther driving will intersect four lodes—viz.: D, E, E1, and E2. At present, the ground in this end is harder than it usually has proved to be. The 65 north is driven about 15 fms. from Crouch's shaft, and say within 15 fms. to cut E4 lode. In driving this end, we intersected E lode, and extended on it west about 10 ft., and thus far found it to be in a confused state, being mixed up with the cross-course. The lode in question is the north portion of E lode, and found to be 20 ft. nearer the south portion at the 65, than it was at the 55 in the level above; and should they continue so to incline to each other, they will then form a junction in the next 10 fms. sinking. The lode in the 55 is about 18 in. wide, and chiefly consists of spar and munda, spotted with ores. At D shaft, the 20 fm. level is driven on D lode about 50 fms. west. For the last 3 fms. driving, it consisted of quartz, and gossans principally; and although, at this point, its depth from surface is 60 fms. odd, its appearance and parts are such as might be expected to be found in a lode 10 or 15 fms. deep. At the same level (20), E lode is extended on the east of D shaft about 68 fms., and since reported last has been passing through rather an unsettled piece of ground; but notwithstanding this, it has generally been productive of more or less ores, and has a whole may be termed an encouraging lode. At present its width is about 2 ft., consisting of spar, munda, and ores; and we are expecting daily to cut Bath's cross-course. The 42 end west of Crouch's is for a season suspended.

WEST CARADON.—At a two-monthly meeting of adventurers, held at Liskeard, on the 26th August, the accounts were presented—showing labour cost for May and June, 2984l. 18s. 2d.; materials, 836l. 8s. 2d.; lords' dues, 303l. 1s. 5d.—4124l. 7s. 9d. By sales of copper ores, 4926l. 6s. 6d.; materials, 26l. 9s. 8d.; balance of last account, 3649l. 14s. 9d.—8602l. 1s. 11d. A dividend of 6l. 10s. per share was declared, 1920l.—leaving a balance in hand of 2557l. 4s. 2d.

WHEEL MARY CONSOLS.—At a meeting of adventurers, held at Liskeard, on the 27th August, the accounts—showing balance against the mine of 1190l. 17s. 11d.—were examined and passed, and a call of 5l. per share made. The following report from Capt. J. Nance and H. Taylor was read to the meeting:—The lode in the 80 fm. level end east, is 2 ft. wide, composed of quartz, and munda, with good stones of ore in it; and in the western end there is a branch of ore 4 in. wide. We have driven through a branch of ore in the eastern end 12 in. wide, which will be set on tribute as soon as the end is extended a few fathoms further east. There is a pitch working in the back of this level, at 13s. 4d. The lode in the 70 end west contains a branch of ore 3 in. wide. In the 60 end west, the lode is at present poor. There is a bunch of ore in the bottom of the 40 fm. level, 6 fms. west of the Count-house shaft; and we purpose to suspend the driving of the 60 and 70 ends for the present, and extend the 50 fm. level west, under the ore in the 40. It is about 5 fms. of being so far west as the bunch of ore going down in the level above; and should it be found productive at the 50, the driving of the 60 and 70 fm. levels may be again resumed. There is about 15 fms. more to drive in each of these levels to come under the ore in the 40. We consider it more advisable for the present to employ our resources in driving the different cross-cuts north and south, to intersect the side lodes. We have intersected a new lode 40 fms. to the south of Wheel Mary old lode in the past week; and we congratulate the shareholders on its being found a course of ore of good quality, 2 ft. wide in the western end, and from 18 to 20 in. in the eastern end; its underlie is about 12 in. per fm. The north cross-cut at the 25 fm. level, is extended towards Wheel Sisters lode 33 fms., leaving about 20 fms. more to be driven to intersect it. The 70 cross-cut is driven 35 fms. towards the same lode. The appearance of this lode in the adit, where it is found from 5 to 6 ft. in width, is of a very promising character; and we are led to hope, that this lode also will be found productive in the deeper levels. We have nothing to fear from any increase of water from the side lodes, having so powerful a pumping engine. We have also two powerful drawing machines for discharging the stuff.

WHEEL SISTERS.—At a two-monthly meeting, held at Liskeard, on the 27th August, the accounts—showing a balance against the mine of 315l. 11s. 9d.—were allowed and passed, and a call of 2l. per share made. It was resolved, that the proposal contained in Capt. Nance's report, now read, to erect a water-wheel drawing machine and crusher, at an expense of about 400l., be adopted, and that the necessary castings, &c., be immediately purchased.—The following report from Capt. J. Nance was read to the meeting:—The engine-shaft is now sunk 8 fms. under the 51 fm. level; we expect it will take six weeks, from this time, to complete the shaft to the 61, and intersect the lode. The lode in the 51 fm. level end east is about 3 ft. wide, with a branch of good ore, 6 in. wide, in it. In the stopes behind this end the lode is 4 ft. wide, but coarse in quality; and in the stopes to the west of the winze it is 3 ft. wide, with a branch of ore, 12 in. wide, on the south part; and another, 4 in. wide, on the north side of it; the middle part consists of capel and quartz, spotted with munda and ore; the western end, at this level, is still poor. In the 41 fm. level end west the lode is 20 in. wide, with stones of black and yellow ore, of good quality; and in the 41 east it is 4 ft. wide, composed of capel, quartz, and stones of ore. In the stopes behind this end it is from 5 ft. to 6 ft. wide, containing a branch of ore, 14 in. wide, on the south side, and another branch on the north, 12 in. wide. The lode in the 31 east is still poor, but it appears more promising than it has been for some time past, and the strata more congenial for mineral. I beg to recommend the shareholders to decide on having a drawing machine, with a crusher attached, without delay; as, by the present slow and expensive mode of drawing and "bucking," our operations are very much obstructed, and the expense exceeds cent. per cent. more than it would if done by machinery. The increased speed of the latter would also enable us to accomplish four times as much work in the same time, and a quantity of coarse ore, now accumulating and valueless, would be reduced and made marketable. A suitable machine has been offered, and can be had cheap—the cost of which (inclusive of erection) would not exceed 400l.

GREAT WHEEL ROUGH TORR CONSOLS.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—In your Journal of the 23d ult., I observe a letter, written by a person signing himself "A. B. C.," reflecting on my report of the Great Wheel Rough Torr Mine. The ostensible object of that letter is to raise the question whether or not the lode discovered at Rough Torr is a continuation of the Wheel Maria lode; but the evident design of the writer is to subject me to ridicule, and to disparage the character of a man who is endeavouring, by honesty and industry, to gain a livelihood for himself and family—whose character is his only property—and who was, in all probability, acquiring mining knowledge, by working as a tributer, long ere your correspondent had begun to stammer forth his "A. B. C." beneath the terrors and the infliction of the birch.

I feel assured the object of the letter, signed "A. B. C.," must have escaped your notice, or you would not have allowed your columns to have been occupied by an unjustifiable attack upon me, as the agent of Wheel Rough Torr, and upon mining captains in general. For example, what peculiar qualification does your correspondent suppose a mining agent obtains by "living next door to the opposer of the system of tutwork and tribute?" What possible connection has such proximity of residence with the Rough Torr Mine? Does your correspondent flatter himself, that, by residing next door to a philosopher, he would ever become wise? Your correspondent inquires what reason I have for stating, that the Wheel Rough Torr is a continuation of the Wheel Maria lode? and he ridicules the idea of any person presuming to trace a lode through 18 miles of granite and killas. In both these points your correspondent travels too fast. If he will peruse the letter signed by me, he will find I never made the assertion, that the Rough Torr was a continuation of the Wheel Maria lode. Such an opinion was expressed in the report, and has been expressed by

several persons in my presence, and especially by a person than whom no one in Cornwall is capable of forming a better judgment. I did not even infer that I had dialled, or that I had the ability to dial, the Wheel Maria lode for a distance of 18 miles. I expressly stated, that attention had been drawn to the Rough Torr, and that the lode had been discovered by large gossan rocks protruding through surface, and maintaining a course east and west, nearly three-quarters of a mile. I then described, with as much accuracy as possible, the extent and character of the lode. Whether it be the Wheel Maria lode or not, is a matter of little consequence; and must certainly remain, for some years, a matter of opinion only. But, if such a lode as I have described does not exist in the Rough Torr set, then I have attempted to impose on the public, and I certainly am deserving of the censure attempted by your correspondent.

Since I have been entrusted with the management of mines, I have always endeavoured to give a faithful and unvarnished report, according to the best of my ability. I have always avoided giving highly-wrought statements, believing them to be injurious to my employers as to persons desirous of purchasing shares. In the present instance, I have not exceeded the truth. This most extraordinary lode is not locked up in a cupboard, nor hidden from the eye of the public: pits have been opened, and are yet left open, for upwards of 200 fathoms on the line of the lode; they are full of gossan, of the most splendid description—even at the slight depth we have continual spots of copper, and the indications are daily improving. I have had too many years practice as a miner to write a report that cannot be relied on. I have, for some years past, been employed to inspect and report upon mines in every stage of their operations; and I can, with confidence, appeal to the parties by whom I have been employed, for fidelity in such reports. In the present instance, it is easy to test the truth of my statements. I challenge your correspondent to take any two respectable agents in the kingdom to inspect this mine; and, if they say my report is not strictly a fair one, I will undertake to pay 10l. for their expenses. If I conceived your correspondent to be possessed of any mining knowledge, and that he could understand my expositions, I should certainly explain to him the indications which led me to think favourably of the neighbourhood of the Rough Torr, and which now lead me to expect a mine of extraordinary quality in that locality; and, if your correspondent yet requires such information, and will attach his signature to his inquiries, I shall be most happy to give him every information he may require.

Down Gate, Stoke Climsland, near Callington, August 31.

WHEEL FRANCO.

SIR,—The information respecting this mine, in the *Mining Journal* of last week, was, no doubt, gratifying to those shareholders who, like myself, were without information. We find the agents are changed—the engine-shaft is being sunk—that a new wheel, with 12 stamp heads, has been put to work, which will increase the returns—that a considerable saving will be effected in the jigging process, and the ores dressed better. We are also informed, that, under the previous management, loss was incurred by the *tutwork* system being adopted, and that it is now intended to work on tribute as much as possible—that it has already been acted upon, and has given "good wages" to the miners, and "profits to the adventurers." This is good, as far as it goes; but your correspondent (who appears to possess the means of giving information) having stated the cost to be 500l. for the month, should have informed us the produce and value of the 140 tons of ore raised. This would have enabled the shareholders to form an opinion, as to the future prospects of profit from the mine: ought not a mine, raising 140 tons of ore monthly, to pay an occasional dividend to the shareholders? The present expenditure shows a cost of 3l. 10s. 6d. for every ton of ore; is not this more than it ought to be in a mine worked by *water-power*? Every economy, consistent with efficient working, ought to be exercised. These are not the times to allow of extravagant expenditure, and the interests of the shareholders should have some consideration. I hope we shall soon see Wheel Franco ore go to public sale, and the accounts published. The mines under the management of London committees have set a good example in this respect, and the public appreciate it by giving those mines their confidence.—S. C.: Sept. 4.

WHEEL CORNWALL MINE.

SIR,—Can you, or any of your correspondents, inform me the state and prospects of this mine, and where situated; for having been told of it being one of the best speculations in existence, I was nearly induced to purchase a few shares, at 10l. each; since which I am informed that the purchase-money is entirely a premium to the parties who are endeavouring to dispose of them in the London market, there being no machinery on the mine. If this is true, Mr. Editor, you will, I think, agree with me, that in the present depressed state of mining such proceedings are too bad.—A FRIEND TO CORNISH MINING: Cornhill, Sept. 4.

COPIAPO MINING COMPANY.

We have been favoured with the following extract of a letter, lately received from Chili, relative to the present position of the mine of this association—and which (from the shares having been for a long time much depressed) will be read with considerable interest by all parties interested:—

"The shareholders in the Copiapo Mining Company are not aware what they are selling at 2l. or 3l. per share: had I the means, I would buy up the whole of their interest at that rate. The ore now on their hands, and the estates, are worth more than 3l. per share, independent of the mines of Checo and San Pedro, both of which are good. The establishment has been greatly reduced by orders from the directors—part of which ought, undoubtedly, to have been done, but has perhaps been carried too far. However, the mines are in a state at present to fully supply sufficient ore for the troop to carry, even on the very limited scale on which they are to be worked—while the expenses are considerably abridged, and the ore is of an excellent quality; this, I am certain, must, and will, afford dividends. I know a gentleman who has offered 2500l. per annum for the estates, and they are well worth it. This is independent of the mines; and all the ore on hand would leave good interest for the money at 3l. per share—to say nothing of the large troop of mules, and other stock, on the estates of the company, and the many thousands of dollars of materials that could well be disposed of here. Were the directors to have the concern wound up at once—to sell the mines—and after carrying the ore on hand, to sell the estates, troops, &c., &c.—they would, I have no doubt, realise more than 6l. per share, after paying all reasonable expenses. The *Dorothy Gales* is expected to load for the company shortly, I understand, and her cargo will be rather below the average produce of the ore."

[FROM CORRESPONDENTS.]

BLENCOWE TIN MINE.—This mine appears to be progressing most satisfactorily, the shareholders anticipating a rich and productive mine. It appears that the lode has been intersected at the 20 fm. level, and found to be rich, single stones of ore from 60 to 70 lbs. weight being broken. The 10 fm. level is also productive. About 4 tons of rich tin stuff was sampled for the past month, and from 5 to 6 tons are calculated on for the present; which will more than pay the cost of working; thus showing where mining is carried on with economy, and the pursuit legitimate, there is little fear of great losses, under careful and efficient management.

HERODSFOT MINE.—Letters were received yesterday, advising a discovery here of an east and west lode; and this day the report has been partially confirmed, from which it appears to be about 3 ft. wide, with a leader of very good ore, averaging 2½ in. wide, and crossing, at nearly right angles, the lead lode in Boase's shaft. The lead lode, generally, appears to be improving.

The *South Australian Register* of the 8th April, announces the discovery of a lode of gold, of extraordinary fineness and purity, in the North Montacute Mine, belonging to the Victoria Mining Company.

IMPERIAL SLATE QUARRIES, CORBALLY.—The *Nenagh Guardian* contains a long account of a visit paid by W. R. Collett, Esq., M.P., to the Imperial Slate Quarries, of which company he is chairman and part proprietor. Mr. Collett addressed the men, about 300 in number—and, like a true philanthropist, ordered a large quantity of meal, which is 15½ pence per ton, to be distributed amongst them gratis, as a reward for the present cessation from outrage throughout that neighbourhood. The company are at all times provided with large supplies of meal in store, which is sold out to the workmen at first cost, and upon one month's credit, by which they are greatly benefited. Mr. Collett returned to Nenagh in the afternoon, and in the evening proceeded to traverse the Templemore and Nenagh Railway line, accompanied by the secretary of the company, and expressed himself highly pleased with the total absence of all engineering difficulties in the route laid down for this undertaking. The hon. gentleman then proceeded to Kilkenny, en route to Dublin.

MINE ACCIDENTS.

Ladymoor, near Wolverhampton.—W. Jewitt was killed by an explosion of sulphur, while making a culvert in the hollow of a coal pit at Ettingshall. **Stadlerhill Colliery, Audley.**—G. Kelsall, and D. Lightfoot were killed, and J. Kent, J. Hinckley, and two others, much injured by an explosion of fire-damp, at Mr. R. E. Heathcote's works.—The accident was clearly shown to have arisen from want of proper care of one of the sufferers, in neglecting the customary mode of working the mine, and also using a naked candle, although all the workmen were amply provided with safety lamps by the proprietor.

Speth Bottoms Colliery, near Rochdale.—J. Richardson was severely burned by an explosion of fire-damp. This is the eighth serious accident from the same cause, within the past few weeks.

King and Queen Iron-Works, Rotherhithe.—As S. Cooper was engaged in the planing-room, his clothes were caught by the machinery, and his leg drawn in, and dreadfully mutilated.

Wheel Vor, Breage.—As J. Andrew was working in Borlase's shaft, he was killed by a fall.—Also, in the same shaft, C. Harry lost his hold, and was killed. It is a melancholy fact, that the fathers of both men were killed in mines—Andrew at Wheel Speedwell, and Harry at Wheel Friendship; and, but a few months since, Andrew's brother was killed at Great Work.

Pennyquon Winch, Doulosia.—W. Owen was killed by falling down the pit.

THE SALT TRADE.

The meeting of the salt trade of England alluded to in our last, as to be held at the Angel Inn, Northwich, took place on Monday, and was attended by all the salt manufacturers of the district, for the purpose of taking into consideration the best means to be adopted for opening the markets of India for the admission of British manufactured salt, with a view to the abolition of the monopoly, at present enjoyed by the East India Company, of almost exclusively introducing salt into India. W. WORTHINGTON, Esq., in the chair.

The minutes of the last general Chamber of Commerce, as well as the report of the committee appointed specially for the free opening of the Indian markets for the admission of British salt, having been read, addresses were delivered by Mr. Aylwin (the author of the pamphlet already referred to), Mr. Greenhields, of Worcester (also the author of a pamphlet on the subject), and several other gentlemen; when it was proposed and resolved:—

That the thanks of the whole body of the salt proprietors of England are due, and hereby tendered, to their committee and the gentlemen who accompanied them to the Board of Control, for the able and strenuous manner in which they have taken up and advocated the question of the admission of British salt into India upon fair and reasonable terms; and that, in confirming the resolutions passed on the 13th ult., the whole body of the salt proprietors of England pledge themselves collectively and individually to aid and support their committee in carrying out the same.

That the thanks of the meeting be given to Mr. Greenhields, for the trouble he has taken, and for the pamphlet he has circulated on this subject.

That the present system of virtual monopoly of salt by the East India Company, being most unjust and oppressive to millions of our fellow-subjects in India, by compelling them to surrender the product of from one to four months of their labour for the purchase of a first necessary of life—and being also most injurious to the manufacturing as well as the shipping and commercial interests of this country—it is advisable that a thorough knowledge of the workings and effects of the salt monopoly shall be disseminated through the country, and that the committee be requested to take such immediate measures as they may deem best to give general publicity to a monopoly, as monstrous and oppressive to all under its influence as it is baneful and injurious to our commercial interests.

That the committee be requested to organise a fresh deputation to the Board of Control, in conjunction with the Manchester, Liverpool, Bristol, Glasgow, and Gloucester Chambers of Commerce, the East India and China, as well as the Shipowners' Associations in London and Liverpool, and such other public bodies as may seem desirable, soliciting them to delegate members to join therein, in order to represent their various respective interests.

That, in order to defray the expenses which must be incurred by the committee, in order to carry out the views of the general body of the salt proprietors of England, a subscription be opened, in such manner as the committee may determine.

That the special thanks of this meeting be tendered to Mr. D. C. Aylwin, of Calcutta, for the information furnished by him relative to the salt trade in India, and also for the valuable pamphlet he has written upon the subject; and that Mr. D. C. Aylwin be requested to become one of the committee for the free opening of the Indian ports.

A committee was then appointed to carry out the views of the meeting, and to arrange a deputation to the Board of Control, in connection with the Manchester, Liverpool, Bristol, Gloucester, and Glasgow Chambers of Commerce, and the Shipowners' Association in London and Liverpool, and with such other bodies as might be desirous of co-operating with them.

WELSH MIDLAND RAILWAY.—Among the many abandoned schemes projected in the fruitful season of railway mania of 1845, perhaps none requires a more careful examination of the items of expenditure than this line. The amount of 2l. 10s. per share was paid about 12 months, and the plans, surveys, &c., were not prepared in time for depositing with the Board of Trade, in November, in accordance with the Parliamentary order. And, although several months have elapsed since the committee of management found it impossible to carry out their scheme, no accounts have been prepared, to be laid before the shareholders. Within the last three weeks a circular has been issued, proposing to the holders of scrip the option of receiving 15s. in part payment of their 50s., or joining in the amalgamation with another line, promising at some future period to pay to the recipients of the 15s. a further amount. Assuredly, sufficient time has been afforded the managing committee to ascertain the full amount of expenditure connected with this lost line, as well as to account for the difference between 15s. and 50s. We are surprised that the shareholders do not demand some account, for they have a positive right to know how, and in what manner, their money has been so profusely used by those into whose trust they have deposited so large an amount. The tardiness of the committee, as well as their apparent apathy to the interests of those concerned, has produced a considerable degree of murmuring and dissatisfaction, which, we sincerely trust, will be immediately removed by a full and succinct statement of their unaccountable proceedings.

CALLAO AND LIMA AND PACIFIC COAST RAILWAY COMPANY.—The prospectuses of this proposed company were issued in September, 1845, having for its primary object that of establishing a line between the city of Callao, and the port of Lima, a distance of seven miles; the capital to consist of 250,000l., in 25,000 shares, of 10l. each—the amount of "deposit, 1l., to be returned in full, if the objects of the company be not carried out." The prospectus, we learn, was drawn up by a gentleman well conversant with the traffic between these places, after an elaborate and scrupulous calculation, showing the probability of a large profit on a comparative small portion of the proposed capital, which induced the public to take up the shares with the greatest avidity, readily paying the deposit of 1l. per share. In accordance with the proposed scheme, an agent was sent to Lima, for the purpose of negotiating with the authorities for a grant of the projected line, who, failing in accomplishing his object, returned some months since; and it is now stated, that a second agent has been sent out to effect that which his predecessor signally failed in—while it is most confidently rumoured that a grant has been obtained from the Government by a party wholly unconnected with the original concoctors. It has also been intimated, that the directors have been purchasing the shares up in the market at 15s. per share—thus depriving the credulous part of the public of one-fourth of their advances. Certainly, some protection should be afforded to those parties who so freely invested their capital in not only the projection itself, but in the responsibility of the directors, whose names we should presume to be a sufficient guarantee for the return of the deposit, which they engaged to do by their prospectus. Such names as Sir Wm. Plunkett de Bathe, Bart., Sir George Rich, Thomas Claude Hamilton, Robert Passenger, Esqs. (omitting the name of Capt. Richardson, whose present position is so very unenviable), we hope will not be handed down to posterity, tarnished with intrigue, injustice, and dishonesty. We would earnestly urge upon the shareholders to convene an early meeting for an immediate dissolution of the company, and thus ascertain their positive position, before greater waste of property takes place.

NEW PATENTS AND REGISTRATIONS.

Extracts from the *Mechanics' Magazine Weekly List of English Patents*:—

R. C. Burrell, Bath, for certain improvements in artificial light.
J. Boydell, Oak Farm Works, near Dudley, Ironmaster, for improvements in applying apparatus to carriages to facilitate the draught.
J. Roose, Darlington, Stafford, tube manufacturer, for improvements in the manufacture of welded iron tubes.
J. Warren, Montague-terrace, Mile-end-road, for improvements in the manufacture of cast screws.
H. Henson, Hampstead, for certain improvements in railways, and railway carriages, having for their object the better accommodation and security of the public.
N. Harvey, Hayle Foundry, St. Erth, Cornwall, for certain improvements in filtering of water for steam-engines and boilers.

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Length Rwy.	Present actual cost.	Last Div.	Traffic Returns. 1846	1845
Arbroath and Forfar	15	£142,900	3 p.c.	£221 7 0	£239
Chester and Birkenhead	15	889,362	2 1/2	725 10 2	735
Dublin and Drogheda	32	631,258	3 1/2	975 5 6	943
Dublin and Kingstown	6	349,736	9	1442 10 9	1432
Dundee and Arbroath	17	153,598	6	545 18 5	577
Durham and Sunderland	19	302,118	2	635 13 6	897
E. Counties & North & East.	145 1/2	4,090,328	5	9180 0 7	6054
Eastern Union	—	—	—	529 14 2	—
Edinburgh and Glasgow	46	1,686,226	6	4379 3 6	3530
Glasgow, Paisley, and Ayr	51	1,104,773	7	3432 9 11	2154
Glasgow, Paisley, & Greenock	23	806,134	2	1420 13 8	1219
Gravesend and Rochester	7	82,828	—	374 0 8	419
Great North of England	45	1,296,198	6	—	—
Great Western	245 1/2	8,179,980	8	20675 3 6	19750
Hartlepool	—	—	—	637 16 8	1168
London and North Western	440 1/2	15,047,301	10	45825 14 1	20998
London and Blackwall	4	1,078,761	1 1/2	1486 3 0	1422
London & Brighton & South Coast	113	3,496,265	5	10240 6 2	6884
London and South-Western	100	2,620,724	10 1/2	7977 2 10 1/2	9004
Manchester and Birmingham	85	2,197,585	6 1/2	—	5464
Manchester & Leeds	61	3,372,240	8	7362 5 5	7620
Manchester, Bolton, & Bury	10	842,725	5 1/2	1275 1 2 1/2	1043
Midland Company	259 1/2	8,831,195	7	20407 2 10	18186
Newcastle and Carlisle	65	1,137,385	5	2443 0 11	1944
Newcastle and Darlington	22 1/2	1,272,031	9	3339 7 5	2613
Newcastle and North Shields	7	316,869	5	—	702
Norfolk	59	673,818	5	1825 14 2	—
North British	58 1/2	—	—	2049 14 9	—
Preston and Wyre	22	430,014	2 1/2	1458 2 5	817
Sheffield and Manchester	41 1/2	1,313,225	8	1998 0 0	1374
South Devon	15	320,942	—	744 14 10	—
South-Eastern and Dover	137 1/2	4,284,594	3 1/2	11289 19 1	8715
Taff Vale	30	648,848	5	1411 16 11	1218
Ulster	25	358,353	5 1/2	654 3 0	588
York and North Midland	84	2,334,599	10	7318 4 0	6495
Northern of France	260	—	4	8036 0 0	—
Orleans and Bordeaux	72	599,040	4	2905 0 0	—
Paris and Orleans	82	2,082,816	9 1/2	8142 0 0	6889
Paris and Rouen	85	1,995,306	8	8320 0 0	8065

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending August 19, was 19,367; amount of money, £20 13s. 4d.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET

mands the city of Oran; the mountainous ridges Guerbes, Bouhamra, and Belalicta, which form the first gradations of the chain of Edouard; at that of Morkra-el-Hadid (an iron bed), near Bona, Djebell-Fill-Fela, and Schikida, near Philippeville. Copper ore is stated to have been discovered at Mounzaia, in the mountains of Tenez, and lead and argentiferous galena ores in Mount Boujareah, near Algiers, as well as manganese. With all the researches which have as yet been made by the engineers for good coal, from one end of the colony to the other, it has now been proved that carbonic mineral does not exist; but only a spurious lignite, or, more properly speaking, a slate of very little use, similar to that worked in the department of the Bouches de Rhone.—*Nous verrons!*

PROSPECTS OF THE IRON TRADE.

[FROM A CORRESPONDENT.]

There never was, perhaps, a period in the history of the iron trade in which its prospects were so promising as at the present moment. We have high prices, occasioned not by speculation, but by legitimate requirements—short stocks, which are daily becoming shorter, as the supply cannot keep pace with the exigencies of the public; a prospective demand now closely pressing on the market, great beyond all precedent; and this, without the possibility of increasing the make of iron to any considerable (if any) extent. That the present very remunerative prices of iron are not the result of speculation, but of legitimate business, is well known to every one who has paid the slightest attention to the iron market for the last few years. Between 1835 and 1840, the prices ranged very high—pig-iron being 6l., 7l., and even 8l. per ton. This was in part occasioned by the impetus given to the trade by the increased demand, but far more by the spirit of speculation, then abroad; and the consequence was that, as soon as speculation subsided, a reaction took place, and a period of depression came, unexampled in its severity. Since then, the uses to which iron is applied have much increased; large supplies of rails have been wanted; and the trade recovering itself, not suddenly, but by a steady and sure progress, has attained the position in which it now stands. With the single exception of the early part of last year, when, for a short time, there was a little gambling in iron speculation, has not for many years prevailed in the iron market; and it is to be hoped it will remain absent for the future, as nothing tends more to place the ironmaster in an embarrassing position than high prices artificially produced, as they interfere with the costs of production, and lead universally to his ultimate loss.

During the period of depression—from 1840 to 1843—the ironmasters, unable to sell, and unwilling to blow out their furnaces, accumulated large stocks of iron, which have stood them in good stead since the period of prosperity has set in; as for some time past the make has been beyond question unequal to the demand, and the deficiency has been supplied from their accumulated stores, which have been thus gradually sold off, and are now, we may say, dissipated; for we believe there never was a time in which the iron in store in this country was so short as at present, and it is daily getting shorter; as at Glasgow the stocks are reducing at the rate of fully 1000 tons per week, with no chance of an increased make, owing to the scarcity of minerals in the Glasgow district—while in Staffordshire, minerals are becoming so scarce, that many of the masters find great difficulty in keeping their furnaces at work. If, then, there be this difficulty in meeting the present demand, how will it be possible to meet that which will press upon the market from this time forward until the railway system (which is now in its infancy), be fully developed? In this country, Acts were obtained, in 1844 and 1845, for 3543 miles; and this session—and this does not include the Acts passed just before the adjournment of Parliament—for 3951 miles; making together 7494 miles of railroad authorized for this country alone—while (according to the Report of Mr. Morrison's Select Committee on Railroads), in France, at the present time, about 620 miles of railroad are in operation; and the whole number of miles to which the railroads will extend in six years is estimated at about 3700 miles—so that there are 3100 miles to be constructed in the next six years; and in Prussia, 700 miles are in the course of construction; upwards of 800 miles more finally adopted, and upwards of 900 miles remain merely as projects; besides which, in every part of Europe, railways are either constructing or projected, and this will constantly be the case so long as the system remains incomplete, as the advantages of this means of communication are so great that the progress of railways cannot be arrested—it is a question of time merely. In India, too, the railway system is likely to find considerable favour, as there is little doubt that the early requirements of that country will not be less than 2000 miles. Without, however, estimating any but lines already authorised, we have in England, France, and Prussia, above 12,000 miles of railway, which will, beyond question, be constructed within the next six years.

Let us consider the effect the demand for the iron required for these undertakings is likely to produce on the English market. It is certain that this country cannot depend upon any foreign market for iron; on the contrary, we are large exporters—having exported in 1845 (as appears by the Parliamentary return published in last week's *Mining Journal*) above 350,000 tons of iron and steel, in a manufactured and unmanufactured state. Our exports are to all countries, including France, Russia, Prussia, Germany, and America—and they are on the increase; as, comparing the export of iron from London and the Clyde during the first six months of 1845, with the export of iron from the same places during the first six months of the present year, they have increased from 162,506 tons to 285,655 tons—an increase of nearly 75 per cent. Being assured, then, that we cannot look to foreign countries for a supply; but that, on the contrary, they will have to look to us for a very much larger supply than any they have yet received, particularly since the modification in the American tariff, it follows that we shall have to find iron for our own railways at all events—viz.: for 7494 miles, which will require, at 500 tons a mile (a moderate estimate), 3,747,000 tons of bar-iron, equal (the loss on converting pig into bar being about 20 per cent.) to 4,496,400 tons of pig-iron in round numbers—4½ millions tons of pig-iron. Now, the make of the kingdom is (as near as it can possibly be estimated) 1,500,000 tons of pig-iron per annum; of this at least 400,000 tons is got rid of in the exports, leaving 1,100,000 tons to supply this country—consequently, should the above railroads be carried out in the next six years, as (unless prevented by want of iron) they undoubtedly will be, the English railroads will require 750,000 tons of pig-iron per annum, for six years to come, and to supply them this country must increase its make at least 70 per cent. That this is an impossibility, is beyond all question; the ironmasters have increased their make already almost, if not quite, to the limit. Iron ore is getting excessively scarce and dear in Staffordshire, and very few new furnaces are building. Indeed, so entirely are the iron properties occupied and pressed to their full work, that not even an iron company has started, with one single exception—that of the Banwen Iron Company, advertised in our columns of to-day; and this shows the tension of the system the more fully, as there is no doubt that any iron property fit to be worked at all, must, for the next 10 or 20 years, return such large profits, that 20 per cent. will be considered but a small matter by the ironmaster. In short, those who are fortunate enough to hold iron properties, possess, as it were, a mine of gold; they have virtually a monopoly which cannot be interfered with, as iron must be had, however costly the price.

We understand that an influential party is now engaged in promoting the erection of an elegant and novel bridge from Lambeth Palace to Horseferry-road, designed by Mr. Thomas Motley, civil engineer, of Bristol. It is proposed to be constructed of cast and wrought iron; its novelty consists in having a splendid arcade of shops on each side, with two carriage-ways; the front towards the river is intended to harmonise with the architecture of the new Houses of Parliament, agreeable to a suggestion by Col. Sir E. Trench. We learn the design has received the approbation of the Lord Mayor and other eminent individuals, desirous of promoting so desirable an object. We hope shortly to have the opportunity of laying before our readers the details of this proposed splendid structure.

FRENCH CONTRACTS.—The Minister of Marine and Colonies, at Paris, has given notice that, on the 12th instant, he will enter into a contract for the furnishing of 1,260,000 kilos (2,520,000 lbs.) of English rock coal, to be delivered at Saint Louis, Island of Senegal, Africa. There are numerous contracts announced, for plate, flattened, and other descriptions of iron, for Cherbourg and other ports.

PASSENGER FARES.—The following comparison is instituted in the *Rapport on the Projet de Loi* on the Northern line, to the Chamber of Deputies, in France, between the passenger fares in England, France, Germany, and Belgium, in centimes per kilometre, in 1844:—

	1st class.	2d class.	3d class.
ENGLAND	19	12	7½
FRANCE	10	7	5-10
GERMANY	9	6	4
BELGIUM	7½	5	3-7-10

NOTICE OF THE COPPER AND TIN RAISED IN CORNWALL.

By ROBERT HUNT, Esq., Keeper of Mining Records.

(Continued from last week's *Mining Journal*.)

The average produce of these mines (enumerated in our last), taken according to the duration of their works, is shown in the following—

	35 mines upwards of 50 years.	40 mines upwards of 10 years but under 50.	31 mines upwards of 5 years but under 20.	114 mines less than 5 yrs.
Average per cent. produce fine copper	7½	7 6-8	7½	8 4-8
Highest av. per cent. prod. of a single mine	13½	14	14½	26 4-8
Lowest av. per cent. prod. of a single mine	4½	4½	4½	2½
No. mines producing above 25 p. ct. cop.	—	—	—	2
No. mines producing above 15 per cent.	—	—	—	4
No. mines producing above 10 per cent.	2	4	2	13
No. mines producing above 5 per cent.	32	34	29	70
No. mines producing less than 5 per cent.	1	2	—	8

The names of the mines, and the average per centage produce of each, is given in the following lists:—

Mines which have been worked more than 80 years—35.	
Tresavean	7 6-8
United Mines	8 4-8
North Roskear	7 4-8
South Roskear	7 4-8
South Huel Buller & Beauchamp	6½
Powley Consols.	7 6-8
Botallack	12½
Levant	13½
Huel Alfred	6
Crisp	6 6-8
East Crisp	8½
Huel Unity and Huel Chance	8 6-8
Trevelyan	9½
Huel Damsel	8½
Huel Basset	9½
Huel Gorland	8½
Cook's Kitchen	6 2-8
Camborn Veau	8½

Average produce per cent. of 35 mines	7½
Highest produce	13½
Lowest ditto	4½
Above 25 per cent.	—
Above 15 ditto	—
Above 10 ditto	2
Above 5 ditto	32
Under 5 ditto	1

Mines which have been worked more than 10 years—40.	
Great Work	10½
Huel Cock	10 1-16
Huel Abraham	6½
Huel Fortune	7½
Chacewater	6½
Godolphin	7 4-8
Trenwith	4½
Huel Clowance	8½
Cudda	12½
Lambo	12½
Huel Squire	8 2-8
Huel Sparrow	6½
Huel Music	14
Marazion Mines	7½
Huel Strawberry	6 2-8
Huel Speedwell	7½
Carzies	8 6-8
Huel Charlotte	8½
Lanescott	8½
Huel Vor	7½
Huel Trannack	6½

Average produce per cent. of 40 mines	7 6-8
Highest produce	14
Lowest produce	4½
Above 25 per cent.	—
Above 15 ditto	—
Above 10 ditto	4
Above 5 ditto	34
Five ditto, and less	2

Mines which have been worked more than 5 years—31.	
Trethellan	5 6-8
Huel Buller	8½
Huel Friendship	6 2-8
Huel Fauny	8½
Weeth	14
Huel Sparrow	8½
Lambo	8½
Unanimit	7½
Huel Treasure	7 4-8
Huel Perran	7 1-16
Penberthy Crofts	7½
North Seal Hole	7½
Huel Teldy	8 2-8
Huel Pink	10
Huel Bolton	6 6-8
Huel Bodiney	6½
Huel Caroline	6 2-8

Average produce per cent. of 31 mines	7½
Highest produce (Weeth)	14
Lowest produce (Huel Vyvyan)	5 4-8
Above 25 per cent.	—
Above 15 ditto	—
Above 10, and 10 ditto	2
Above 5 ditto	29
Under 5 ditto	—

Mines which have been worked less than 5 years—114.	
Polgoth	8 4-8
Boccon	—
Huel Clifford	—
Trevelyan Consols	—
Trevelyan	—
Huel Trevelyan	8 1-16
St. Caradon	—
Tinctor	—
Reith Consols	—
Huel Andrew	—
Chiverton	—
Boscon	—
Bal-n-hale	—
Huel Cole	7½
Huel Madeline	—
Huel Ovis	—
Parknoweth	—
Spear	11
Spear Moor	26
Redruth Consols	6½
St. Huel Rose	—
W. Huel Cock	6½
Poldice	7
Huel Drevell	9 2-8
Huel Tamer	6½
Huel Spinstor	8 2-8
Perran Vale	6½
Carn Perran	7½
Penwinick	7 2-8
St. George	9 6-8
Druid	18 4-8
Huel Sperris	5 6-8
Pobree	19½
Huel Ann	6½
Huel Regent	8½
Horland	12½
Huel Jubilee	7 4-8
Huel Commerce	10
Huel Mary	5½
Legosick	7½
Condurrow	9
Huel Almouth	6½
Huel Great Falmouth	7 2-8
Poigine	8
Huel Bank	9½
Huel Rock	6½
Huel Seaton	8½
Huel Ashorne	8 6-8
Sydney Cove	8 1-16
Tregothnan	5 6-8
Huel Chipmendale	7½
Huel Messer	8 2-8
Bolemin	3 6-8
Phoenix Mine	12½
Huel Penrose	7 6-8
Granbla and St. Anghyn	8 2-8
Huel St. Francis	6 5-8

Average produce per cent. of 114 mines	8 4-8
Highest produce (Barton)	26 4-8
Lowest produce (Huel Cecilia)	2
Above 25 per cent.	2
Above 15 per cent., and under 20	—
Above 10 per cent., and under 15	13
Above 5 per cent., and under 10	79
Under 5 per cent.	8

[To be concluded in next week's *Mining Journal*.]

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

My preceding letters have contained a summary of the most important facts set forth in the Report of the Engineers of Mines, attached to the department of Public Works, and those facts will have given your readers a correct idea of the state of mining industry in this country. But the report is not yet exhausted; and I propose, from time to time, to lay before you all such quotations as present any interest at all to the persons who occupy themselves with the state, prospects, and progress of the iron and coal trade of France. To-day, I quote few facts relative to the production of iron in different districts, or (as the French call them) *groupes*. The groupe called the north-east comprises the north-eastern frontier. It possesses several canals and navigable rivers—among them the Meuse, the Moselle, the Sarre, the Rhine, the canals of Alsace, &c. By means of these communications, it obtains at a moderate rent coals from Charleroi, Namur, and Leige, and from the Rhinish provinces of Prussia and Bavaria. The iron establishments situated in it were thus enabled to introduce the (for France) new and improved system of employing coal, instead of wood, in the furnaces—the consequence of which has been a remarkable increase in the production. Thus, in 1835, the quantity of cast iron fabricated was 409,302 metrical quintals; in 1844, it increased to 551,330; the quantity of forged iron, in 1835, was 300,689; in 1844, it rose to 430,316 metrical quintals. The Government engineers express an opinion, that a still more remarkable increase of the production may be expected on the completion of the railways now projected, and of the canal joining the Marne to the Rhine; and they describe the districts to be united by such railways as the richest in coals and ores of France—perhaps, of the European continent. The report might have added, that the railways will also have a most beneficial effect on the prosperity of the groupe, by increasing the facilities for disposing of the products. In the groupe of Champagne and Bourgogne, the production of cast iron, in 1835, was 811,927 metrical quintals; in 1844, it rose to 904,898; of forged iron, in 1835, the quantity was 471,176 metrical quintals; and in 1844, 525,370. The increase, it will be seen, was not so remarkable as in the north-eastern groupe. This Champagne and Bourgogne groupe was, up to 1835, the most productive of all France; for it possessed, and still possesses, the largest quantities of ores, and is situated in a country where wood is very plentiful. But the substitution of coal for wood in the furnaces caused it to be surpassed—its great distance from any coal pit compelling it to cling to the old plan of using nothing but wood. It is, too, deprived of canal and other means of cheap conveyance. In the groupe of the centre, the production of cast iron in 1835 was 347,277 metrical quintals; in 1834, it rose to 663,515; of forged iron, in 1835, 251,465 metrical quintals; in 1844, 411,716. This groupe is well supplied with coal from the pits of Creuzot, Planzy, Decise, Commeny, Dorjet, Bezenet, the basins of the Loire and Brassac. Its ore is within easy reach, and it possesses the canals of the Nivernais, Allier, and Loire, &c. In a little while, it will have an extension of water communication, and in two or three years will be further enriched with railways. Its prospects, therefore, are bright and promising. The south-western groupe produced, in 1835, 87,199 metrical quintals of cast iron; in 1844, 108,296; forged iron, in 1835, 39,154; in 1844, 53,851. The deficiency of fuel will prevent the production of this groupe from ever becoming very considerable: no great increase upon 1844 can possibly be expected, and it is by no means improbable that there may be a falling off. At one time it was believed that turf and peat, with which the neighbourhood abounds, would supply the place of coke and wood, but experience has proved this to be a grievous error. A few years ago there were some extensive woods, but they have been cut down long ago. Consequently, the prospects of the south-western district are remarkably gloomy.

Within the last few days the Minister of Marine has issued further notices of large contracts for the supply of coke, iron, coal, &c., to the dockyards, to be taken in the course of the present month. Among them are 53,000 kil. of common sheet-iron for Cherbourg; 50,000 superior ditto; 138,600 kil. of iron martell, and 441,600 kil. of iron lamines for Rochefort, &c.

The annual meeting of the Nouvelle Montagne shareholders is called for the 30th September.

Some little sensation has been expressed at one of the Government steamers being unable to obtain a supply of coal at Cherbourg, Brest, Nantes, and other dockyards. The same thing occurred some months ago in a larger port town to the Prince de Joinville; he could not put to sea, even for a few hours' trip, because a sack of coals was not to be found in the Government dockyard.

The free traders have held their first public meeting. It was numerously attended for Paris—800 persons being present. Some very good speeches were delivered.

I was in the country the other day, and was surprised to find the greater part of the ploughs, harrows, and other agricultural instruments, made entirely of wood. In the construction of wagons and other heavy vehicles, scarcely any iron enters. The horses are harnessed thereto by long ropes, or leather straps, and you do not see any of those long chains with which our horses pull the heaviest loads. In fact, iron is never employed whenever any other material can be substituted. The great dearth of this article is, of course, the cause of this. The agricultural interest would, therefore, benefit immensely by an abolition of the present scandalous imposts.

The expected ordinance for a reduction of the duty on the importation of iron has not yet made its appearance, and nothing whatever is said about it. People begin to think that to say it was coming was only an invention of the enemy to prevent clamour. In truth, the news was almost too good to be true. The Minister of Commerce is seriously, if not dangerously, ill. He is a protectionist in principle and by interest, and as a clothmaker by trade, he feels particularly reluctant to remove the duties on iron, lest people, after having enjoyed the advantage of cheap iron, should clamour for cheap cloth.

Some large wood sales have been recently effected at prices so high, that, according to St. Dizier letters, a further advance in the price of iron may be looked for, and kept up all the winter—Paris, Sept. 1.

IRON TRADE IN FRANCE.—The last accounts from St. Dizier state, that the current prices of iron and cast metal remain the same. Flattened iron is quoted at 15l. 12s. 6d., delivered at St. Dizier. The manufacture of that article is very active, and the demands are increasing daily, which proves that this description of iron is becoming more generally in use. Bar iron or hammered (*fers battus*) is quoted also at 15l. 12s. 6d. There are plenty of samples; but, in consequence of the dry and hot weather, a greater portion of the furnaces have blown out their fires. White cast metals are at 11l. 12s. 6d.—and some very extensive contracts have been entered into, for delivery in October next, at that price, which, there is no doubt, will be firmly maintained. Some very large purchases of charcoal have been made by the proprietors of the different furnaces and forges, the last sales or contracts were at 15 fr., or 12s. 6d., per double stère.

IRON-WORKS IN CANADA.—Considerable interest has been excited by the sale, by order of Government, of the St. Maurice Forges, near Three Rivers, long leased by the Hon. Matthew Bell, of that place. This establishment was founded by the French Government previous to Canada becoming a British possession, and is chiefly valuable from the inexhaustible supply of iron ore in its neighbourhood. The upset price was 3000l.—Mr. A. Bell bid 5500l. Mr. M. T. Hart, of Three Rivers, 5550l., when, there being no higher bidder, it was adjudged to Mr. Henry Stuart, of Montreal, for 5575l.—the sum bid by him.

COCHINEAL IN ALGERIA.—The French are evidently making the most extraordinary exertions to render available in some degree their expensive possessions in Algeria. It is well known that the valuable insect, the cochineal, lives upon a beautiful violet scarlet coloured flower, called "nopal," principally found indigenous to Old Castile, in Spain, and in Mexico; this plant is found to grow to great perfection in Algeria, and the Government have given orders for most extensive plantations on the Crown lands, which have already been commenced, and great expectations are held out as to the results. The larvae will be brought to the plantations in the proper season, and every means taken to secure the healthy growth of the insects; they are of the order "hemipteres," and when dried and prepared, produce the well-known and beautiful pigment carmine.

COPPER COINAGE IN FRANCE.—M. Pelouze has been for some time engaged in ascertaining the composition of the various coinages in copper and brass, at present in circulation. It appears from the returns made by the commissioners of the mint, that the estimated value of small coinage, one and two sous pieces, in circulation is equal to 1,200,000l. sterling. He collected at random 40l. worth of these coins, and from analysis ascertained that they contained 0.929 parts of the weight in copper, from which he estimates that the whole circulation of 1,200,000l.—80,000,000 fr. contains 11,479,500 lbs. of copper, the entire weight being 12,382,200 lbs. We are not informed what metal constitutes the alloy.

Original Correspondence.

THE VICTORIA IRON-WORKS.

SIR,—I observe, in the last Number of your Journal, a paragraph headed "The Monmouthshire and Glamorganshire Banking Company, and the Victoria Iron-Works," in which are introduced, amongst other false and malicious statements, representations which are totally incorrect, respecting myself, and to which I feel called upon briefly to allude. It is stated, that our mineral agent has urged upon me the suspension of our "Deep Pit" operations as dangerous, and unsafe; that arrangements have been made for turning the water from the "Three Quarter" coal workings into this pit, in case of an explosion, as the only means of relief to the men, should such an accident occur; also, that such danger has induced the contractor to leave. I beg to state, that our mineral agent has never advised me to discontinue those workings—that no idea of letting in the "Three Quarter" water ever occurred to me—and that the contractor has not been induced to leave from any fears of the pit being dangerous. I may add, that the statements respecting the cost of our iron, and the amount of salary paid to each agent named (excepting to one who has for some time left), are grossly exaggerated.

JAMES BEAUMONT.

Victoria Iron-Works, Sept. 3.

MONMOUTHSHIRE AND GLAMORGANSHIRE BANKING COMPANY, AND THE VICTORIA IRON-WORKS.

SIR,—The letter of "A Looker On," inserted in your last week's valuable Journal, contained an estimate of the cost of iron at Victoria Works of so startling a nature, that I was induced to take some pains to investigate the subject. I obtained the opinion of a practical ironmaster: that gentleman, after some consideration, aided by private memoranda, relating to his own works, to which he had reference, to my great surprise, assured me that he believed the cost as stated—viz.: 5*l*. 12*s*. 4*d*.—was by no means overstated; and further, intimated that the figures 6*l*. 3*s*. 7*d*. were nearer to the actual cost. Not being conversant with such matters, I cannot convey that gentleman's explanations, as to the cause being attributable to the smallness of the make, and a want of quality—the wages of men being the same to make 40 tons per furnace per week as 140 tons, with reference to engineers, firemen, &c., and what he called "common charges." It further appears that, after a lapse of 18 months, or nearer two years since, preparations were made for starting the works—that, instead of being enabled to raise an additional supply of materials, we are in fact falling off considerably, and that too in our most productive mines; and I hear that it will take nearly two years to sink the second pit, as it is now only just commencing; and if, during that time, we continue making iron from mines averaging no more than 16 per cent. of iron, 1 ton of iron will require 6*l*. 10*s*. 9*d*. for mine only, to which must be added the other charges of 2*l*. 12*s*. 4*d*., making our iron cost the sum of 7*l*. 6*s*. 1*d*. per ton.

In the same paper that contains "A Looker On's" letter, I see the selling price of iron to be 4*l*. 5*s*. to 5*l*. per ton—that is, for cold-blast foundry pig—and my friend the ironmaster informs me, that the difference in price between this iron and that making at Victoria (white), is full 17*s*. 6*d*. per ton. If this be really a true picture, there is nothing but ruin before us. I for one shall be rejoiced to find it otherwise, though I fear it is too true. My interest in the bank will not justify my taking steps to put a stop to these insane proceedings, nor the interest of my family admit of it; but I do hope and trust, that, by exposing to the public gaze, in your columns, every now and then, the proceedings of the bank directors, they may be ashamed to do their duty to us. It is manifest to me, that we shareholders are being sacrificed for the purpose of pursuing a personal enmity between the directors and Sir B. Hall. Were it not for your pages, the loss of 12,000*l*. by the priest would have fallen on the shareholders: as it is, I understand that we have only security for 7000*l*., and that 5000*l*. is an actual loss. Let us, however, be thankful for this, that it is not worse. One thing is certainly most extraordinary to common capacities to comprehend—that is, whether we lose thousands by plundering priests or not, our dividends continue the same. Exposures of mal-practices of this kind, in my mind, are far more effectual in bringing parties to a proper sense of their duties, than Chancery suits—for the latter I have no relish.

Let "A Looker On" have full scope, and as long as he adheres to what is correct and true, he has sought for it. He evidently seems to be a master of his subject. Another absurd project, puffing in the newspapers, under the head of "Great Improvement in Machinery at Victoria Iron-Works," was exposed by one of your correspondents; and, on the Wednesday following, the whole of the great improvement was swept off the ground. I doubt not but that the danger apprehended from an explosion of the fire-damp, by "A Looker On," will be as speedily corrected by stopping the pit.—AN UNFORTUNATE SHAREHOLDER: Cardiff, Sept. 3.

COST-BOOK SYSTEM.

SIR,—I read with some interest, in the *Mining Journal* of last week, a definition of "What is the Cost-book System," and it appeared to me to be more like what it ought to be than any I have before seen. In the 6th clause, it is stated—"The purser at the end of every two months is to call a general meeting of the shareholders to inspect the accounts, and forward to each of the shareholders after such meeting a copy of the receipts and expenditure." I have been, and am, a shareholder in several mines, but my employment and living in London prevents my attending meetings of the shareholders, to inspect the accounts, &c.; and as the mines unfortunately do not pay dividends, I am not informed anything respecting them, excepting that a call of £—per share is made, which I am requested to pay into the bankers. Now, sir, I should feel obliged if your correspondent will state, whether it is compulsory on the purser to send me a statement of the receipts and expenditure of the mine; and, if he does not, whether I can be compelled to pay any calls that may be made? It is certain, that with a great number of mines (if not the majority), conducted on the "Cost-book System," the non-resident shareholders are kept in a state of ignorance as to the affairs of the mine, but are expected to pay the calls. Perhaps your correspondent, or yourself, would also inform your readers—what are the advantages of the "Cost-book System," as compared with the *Joint-Stock Companies Act*? In the latter case, it is compulsory on the secretary to send a printed statement of the affairs of the company 14 days before the day of general meeting, which gives the shareholders an opportunity of examining their accounts previously; in this respect, therefore, it appears, the advantage is possessed by shareholders in joint-stock companies: it is too certain that, in many instances, neither agents, pursers, or captains, are partial to publicity—and this renders it the more imperative on shareholders to insist upon the fullest information, as to how their moneys are expended. I am glad to see that your able correspondent, "M. P. R.," has taken up the subject of mine management, and I trust he will persevere until an honest statement is sent from every mine every week; those who subscribe the capital will soon find their property increased in value, and mining held in better estimation than it now is by the public.

August 27.

X. Y. Z.

WHAT IS THE COST-BOOK SYSTEM?

SIR,—The above interrogation must, it seems, appear again in your paper, to obtain a satisfactory answer. My previous letter, upon this subject, was intended to prevent, or correct, the erroneous impressions which your correspondent's premises and conclusions were likely to produce upon the minds of your readers. I am aware that my description of the Cost-book Principle was somewhat vague; but to give a clear and intelligible account of the matter would, perhaps, occupy more space than your Journal could well spare.* If, however, these present remarks will in any way tend to dispel the profound ignorance which really seems to exist upon this subject, the object of writing them will be fully answered.

A company, constituted upon the Cost-book System, is in effect a partnership: rules being substituted for the partnership deed, which rules bind all the shareholders together, and give them a joint interest and responsibility. True it is; that shareholders under this system have the power of ridding themselves of responsibility; they have also many other advantages and privileges, which are not, and could not, be possessed under a deed of partnership; but all these advantages are secured to the shareholder by the rules. The rules of the company, if properly formed, constitute the system. Much error exists as to the mode of conducting the business of the cost-book; but all matters, such as the payment of cost, appointment of officers, making of calls, and forming of committees, or directions, are directed and regulated by the laws of the company.

These remarks induce me to reiterate, that the best method of becoming acquainted with the Cost-book Principle, and the responsibility incurred under it by shareholders, is to inspect the cost-book, to see the machinery

* We should be very happy to devote space for a full description of the Cost-book System, and which we believe our correspondent well able to supply. A clear and detailed exposition of the principle would be of considerable interest to the mining world at the present time.—Ed. M. J.

of the system at work. This is by no means a matter so difficult as you appear to consider; in fact, the difficulty can only exist where the system is improperly worked out. For, if a company be properly constituted and conducted, the cost-book should be open to the inspection of every shareholder, and copies of the rules furnished whenever required. If the business of the mine was conducted in London, the principal cost-book would be at the office in London, and a copy of it on the mine; but, as I before observed, all these circumstances should be regulated by the rules.

It may not be superfluous to say a few words upon the question of responsibility; for on this subject there appears to be more than an usual amount of error. I will observe, in the first place, that every person accepting shares in a cost-book company renders himself liable for the whole of the claims of the company; and startling as this assertion may prove to some, it is no less true. It may now be asked, how the shareholder, who really incurs so much responsibility, is protected? To this question, I must again reply, by the laws of the company, which, if properly formed, make full provision for a shareholder, having paid his calls, being protected against the claims of the company. The next question to which I venture to reply has been put hypothetically in your article upon this subject in last week's paper. To the proposition there put forth, I say that, if an action was brought by a merchant for supplies to a cost-book company against a person who had duly resigned his interest in that company, the merchant, so bringing his action, would certainly be non-suited. For what is really the case?—A sues B; supposing B to be a shareholder, B pleads he is not a shareholder, and this, under the Cost-book System, is a complete answer to the action. The case you put in your leading article is, however, a very extreme one; but even supposing an action was so brought, and a verdict against the defendant obtained, surely the defendant has ample means of recovering from the company!

The Cost-book System has its merits and its defects; but as a system it is very simple, and nearly perfect. You, sir, express a desire to see its "mysteries exploded;" and I venture to say that if you, or your correspondents, will make public what is supposed to constitute its mysteries, they will soon be explained. At present, I am disposed to think that the mysteries of the Cost-book System exist only in the imaginations of some few discontented persons, who have, perhaps, suffered from the neglect of their own affairs; but, sir, I have a perfect contempt for the mental faculties of that man who, after thrusting his fingers into the burning coals, complains that the fire has burnt his fingers.

Ashley-terrace, City-road, Sept. 1.

I. E.

MINE SURVEYING.

SIR,—Will Mr. Budge be so obliging as to give a definition of a promiscuous angle? I must confess to me it is inexplicable; and also inform us, how the promiscuous angles were got? Are they angles of the field?—or are they obtained by traversing or surveying on the back angle? A clear idea of the nature of the angles is of the utmost importance, and must plead as my excuse for this intrusion upon your columns. OPTIMUS.

Burnley, August 26.

IMPROVEMENTS IN THE MANUFACTURE OF IRON.

SIR,—In your last week's *Mining Journal*, we have the specification of a patent of a blast-furnace granted to Mr. Rees Davies, Ystradgynlais, in the county of Brecon, for improvements in the manufacture of iron. Will you, sir, or any of your correspondents, please to look in the *Mechanics' Magazine*, vol. 27, Saturday, June 3, 1837, wherein will be found a description of Deakin's improved blast furnace, for smelting iron ore. I cannot say, that Mr. Rees Davies has copied that description of my blast-furnace; but it certainly appears to be a very remarkable coincidence, that there should be so great a similarity in the two inventions—the only difference in the two plans being, that I allow the materials to fall from the heating tubes into the smelting furnace, and Mr. Davies intends to push or poke them in.—THOMAS DEAKIN: Blaenavon, August 25.

GREENHOW'S GEOMETRICAL RAILWAY.

SIR,—Were I in the least degree doubtful of my position, in regard to the principles of the Geometrical Railway System, the confident manner in which M. Burnier asserts his opinion, and (as it were) jumps at conclusions, might give me a little uneasiness; but such not being the case, the formidable array of apparently conclusive arguments falls harmless to the ground. I shall not make a pedantic display of arguments, but proceed at once to reply as concisely as possible. In the first place, Mr. B. says, "The law of the friction not increasing with the surface in contact, is a positive law in mechanics;" and, therefore, condemns my axiom, "That the less the points of contact the less is the friction." Now, the law he speaks of has not been established as a positive law—the experiments of the parties referred to not being conclusive. Nor would it apply to railways, were it even fully established—because a railway is not one continuous line of unbroken rail, but composed of many pieces of short length, more or less butted together in the chair; no connection existing between them, the level of the two cannot be so truly kept, as not to offer a resistance to the rolling wheel, and, consequently, cause friction, which will increase or diminish with the breadth of the surface in contact; therefore, those wheels and rails will have less resistance, and less friction, where the points of contact are least. M. Burnier next assumes, that he has proved the whole of the concave tire to be a flange, constantly acting. Now, this I distinctly deny; because, when the wheel is progressing in a direct line with the rail, without any tendency to take a lateral direction, the pressure will be immediately perpendicular to the centre of the rail; therefore, the point on its surface perpendicular to its centre will have to sustain the greater part of the weight: gravitation under all circumstances acting perpendicular to the surface—consequently, the pressure will diminish at each degree of the quadrant, from 90° on the vertex, to the diameter which passes through the centre at right angles with the perpendicular; the diminution of pressure at each intermediate degree being in same ratio as the tangent of the arc is to the secant—whilst the increase of friction on the whole quadrant being brought into close contact, is only in same ratio as the cosine of the arc or the circumference of the rail is to the radius of a circle of much greater circumference—that of the wheel running upon it. Therefore, the violence of the contact diminishes at a greater ratio, than the increase in the speed of the points in contact; consequently, the increase of friction is of little moment. This is supposing the tire to fit, and embrace the rail on both sides; but as the tire I propose does not do so, that part on the outside of the point on the surface of the rail, perpendicular to its centre, being the segment of a circle of double the diameter of the rail, recedes from it; and so allows the wheel to rest almost exclusively on the vertex of the rail—the extreme points of the tire not being in contact at all under ordinary circumstances; the experiments described by me, in the *Mining Journal* of last week, fully corroborate this.

My ally, "G. M. T.," whoever he may be, has shown himself so well able to conduct his own case, that I shall not interfere with the remarks made by M. Burnier on him; but proceed at once to the inclined spoke, which has so offended that gentleman's propriety. Now, with a round rail and concave wheel tire, were the spoke placed to rest perpendicularly on the vertex of the rail, the only resistance to the wheel taking a lateral direction, and running off the rail, would be from the gravity retaining the grooved or concave tire in its position on the convex rail. But in rapid motion, when the velocity of the momentum had a great preponderance over the gravitation, the security afforded by the concave tire would diminish in exact ratio to the increasing preponderance of the momentum; when, should a difference in the relative level of the rails, or the resilient action, give the momentum an inclination to deviate from a straight line, the lateral impulse would throw the spoke beyond the perpendicular, and thus allow the concave to withdraw from the convex—the pressure being applied through the spoke to the tire, as many degrees without the vertex of the rail, as may be in the inclination given to the spoke by the impetus, at once destroying the resistance to lateral displacement. I state in my pamphlet (page 11), it must be apparent to every one, that, "on the spoke being thrown beyond the perpendicular, should lateral pressure be applied in that direction, the concave will withdraw from the convex." To prevent this effect, from causes which are at all times in operation, the spokes ought to be so arranged as to communicate the pressure to the concave tire within that point resting on the point of the rail's surface perpendicular to its centre, and so long as the pressure is so communicated, as to place the resistance within that point, it will be impossible to throw the wheel off the rail, and the carriage must pass safely along; the mechanical relation between the wheel and the rail remaining unbroken, the value of this resistance to lateral displacement will be in exact ratio to the cotangent of the arc, terminated by the inclined spoke. It was necessary to limit the inclination, and, in doing so, to ascertain the angle, which had a like relation to each part of the tire, that within and that without the point on the surface of the rail perpendicular to its centre. An arc of 67½° measured from the diameter, which passes through the centre of the rail, at right angles to the perpendicular, gave the only angle by which the spoke

would have a similar relation to both of the segments composing the tire; and thus, at all times, secure the points of contact of the opposite wheels, to revolve round the common axis at equal speeds. Now, the complement of the arc, 67½°, is 22½°. Therefore, that is the distance short of 90°, or the perpendicular, at which the spoke must be placed.

As far as strength goes, I have little doubt that, in practice, the inclined spoke will prove the strongest, as, in rapid travelling, the strength required is not to resist increased perpendicular pressure, but continual lateral impulses, imparted with a more or less degree of force, as the circumstances causing them may create. With a spoke at right angles with the axle-tree, this lateral thrust will be diagonally across both; and, if sufficiently strong, may break one or both, or drive the flange off the wheel, whilst, with the inclined spoke, the impulse is communicated along the axle to the spoke, and through it to the rail, directly in the line taken by the spoke, so pressing on the rail as many degrees within the vertex, as are contained in the inclination of the spoke from the perpendicular: thus, those violent impulses which create the danger of railway travelling are more hazardous to the perpendicular spoke than to the inclined one.

The experiments tried by Mr. Wyatt on an oval rail have not the least analogy to the rail and wheel I propose: a tire fitted to an oval rail will not adjust itself in any direction but one, and the slightest alteration in circumstances would produce much more serious consequences than now accrue on the flat rail and angular flange. Therefore, "the conclusions drawn from this comparison are false." C. H. GREENHOW.

Lothbury, Sept. 3.

GREENHOW'S GEOMETRICAL RAILWAY.

SIR,—Much of the logic of M. Burnier falls to the ground before the simple and conclusive experiments of Mr. Greenhow, on the comparative friction occasioned by the passage of their appropriate wheels over the flat and the round rail. Nothing can be more to the purpose than Mr. Greenhow's description, in your last *Mining Journal*, of his experiments; and the proof of the correctness of his conclusions is so easy and demonstrable, that any one may satisfy himself of their truth. How far these conclusions can be made to harmonise with the law of friction cited by M. Burnier, may, perhaps, be determined by future experiments. If the law be so well established as M. Burnier supposes, I cannot doubt that new facts will be brought under its control. But it is certain that the results of Mr. Greenhow's experiments are contrary to what "the law of friction not increasing with the surface in contact," led M. Burnier to anticipate. Perhaps, M. Burnier may be disposed to admit, that I was justified in asserting, that the question is still an open one; and it is by no means impossible, that the law has been too hastily assumed as established.

I am somewhat surprised that so accurate a logician as M. Burnier should conclude that, because Mr. Wyatt did not find oval rails to answer in 1801, Mr. Greenhow cannot prove the superiority of round rails in 1846. It is certainly as easy to prove that oval is not round, as it was for a former president of the Royal Society to prove that "fleas are not lobsters." But, probably, M. Burnier will find it sufficient to try how an oval would supply the place of a round wheel. Round is a figure having every point in its circumference equidistant from the centre; and hence its peculiar fitness for machinery, wherein concentric movements are so constantly required; and, in truth, it is a concentric movement on the rail, for which the ordinary form of rail is totally unfitted, which so often throws the train off the line. But to reduce M. Burnier's argument to the formulae of one of his own propositions:—

Dicimus.—Mr. Wyatt tried an oval rail in 1801, without success.

Atqui.—The wheels were formed with grooved tires, fitting loosely to the rails.

Ergo.—A round rail and wheel, with a tire correctly fitted, must fail in 1846.

Corollarium.—A flat rail and wheel with an angular flange have been adopted, solely because a better plan has not sooner been found out.

M. Burnier has, probably, become convinced that the illustration of the piston and cylinder is less irrelevant than he at first supposed. If his own formulae be again adopted, it will stand thus:—

Dicimus.—A circular piston moving in a cylindrical tube is attended with less friction than any other form, and fits equally well in all directions.

Atqui.—No series of experiments has proved the superior value of a square piston.

Ergo.—Engineers have employed a cylindrical tube and a round piston.

And, by a parity of reasoning, with the exception of the atqui—for ample proof has been afforded, in the loss of 73 lives, and the injury of 84 persons within seven months, of the inaptitude of a quasi square rail and flange to afford safety.—Mr. Greenhow has adopted the converse application of this principle. Instead of making a round piston work in a cylindrical tube, he has made the quadrant of a cylinder work upon a round rail; and he finds, by careful experiment, that the friction is greatly less than on the ordinary rail. I thank M. Burnier for affording me this opportunity of proving his logic wrong, and Mr. Greenhow's principle right. To satisfy your readers, that my reasoning is correct, according to the method of M. Burnier, I must refer them to his letter in your last week's Journal; and I am sure that, when they have carefully read it, they will acquit me of having treated the subject too lightly.—G. M. T.: Cambridge, Aug. 31.

DIMINISHING THE VELOCITY OF THE STEAM PISTON.

SIR,—I observe, in your paper of the 22d instant, a brief account (condensed from the *Mechanics' Magazine* of the previous week) of a mode proposed for diminishing the velocity of the steam piston, which, in railway engines, has long appeared to me to be too great; and that we are in want of a smooth and economical means, for giving the required velocity to the driving wheels, with a less velocity of the piston. The mode alluded to in the *Mining Journal* of the above date, seems to me worthy of a trial. Without wishing to detract from the claims of Mr. A. Gregory to originality, I may be permitted to remark, that I have thought some what on the practical difficulties attending such an application—as I, five or six months ago, proposed the same thing in principle, but having water as the medium for transmitting the power. There can be little doubt but that oil is quite equal, if not preferable, for such a purpose. To me it seems desirable to have as little liquid to move at each stroke as possible, else the momentum and friction become considerable; nor can I see any good reason why the barrel of the pump or pumps should, in their internal diameters, be greater than such a size as is requisite to give strength to the connecting-rod and plunger: we then merely substitute a column of liquid for that of a rigid bar. To me it also appears best to have the two pumps of the same size in diameter, and that which is put in motion by the engine to have two or three times the length of stroke of that which communicates the power to the driving wheels; when, supposing no leakage, we should thus, with one-half or one-third the velocity of the present steam piston, produce through the second pump the same rapidity of revolution in the driving wheels as at present. The question, however, here, is the pressure which such a column would have to transmit. We obtain a definite idea on this point, by taking a 13-inch diameter piston, with 70 lbs. effective pressure per square inch, which gives 9310 lbs. as that which the connecting-rod has, in the present arrangement, to transmit to the driving wheels. Let us now suppose the plunger of the pump to have an area equal to two square inches, we shall then find the liquid will be pressed with a force equal to 4655 lbs. per square inch; and, consequently, all parts of the pump with which the liquid so pressed is in contact, must sustain a like pressure per square inch. To this I see no objection; except as it affects the valves and joinings through which the pistons pass. In reference to the piston, I apprehend there would be no great difficulty, as they could be secured much in the same way as in the hydraulic press. To insure the valves working properly, seems to me, however, a matter of much greater difficulty when acted upon by such a pressure.

Perhaps, Mr. Gregory is fortified against this; or I would suggest, as a means of removing the objection in a great degree, that the last, or short stroke pump, which communicates the power to the driving wheels, be one with two barrels, cast together with two plungers, connected with one connecting-rod, working out at opposite ends of the barrels—in which case the valves of each barrel may be relieved from the pressure, so as to ensure greater certainty of action: Again, owing to the pressure being so very great per square inch, we should be obliged to have the piston rod capable of passing out at each end, or there would be a great inequality in the force imparted to the connecting-rod at each half-stroke. This objection would be met by the two plungers, as suggested—the plungers themselves being of no greater strength than that required in the connecting-rod. With such a mode, if successful, we may, if desirable, dispense with one of the engines—the pumps imparting the power at right angles to the two driving wheels; the engine itself in this case not requiring immediately any other than that of a rectilinear pumping motion. I wish Mr. Gregory success, and hope to see the practical difficulties disappear by judicious arrangements. I think the end aimed at desirable, and the principles he proposes sound, nor do I think it need be complex, if he

make use of small pumps, so as to avoid the use of a large quantity of liquid moving at such great velocities.—T. CRADDOCK, Broad-street, Birmingham, August 26.

AUXILIARY BREAK FOR ATMOSPHERIC RAILWAYS.

SIR.—A possible oversight, due solely to myself, occurred in my communication of last week, which please grant me this early opportunity to correct. In the first column, page 371, eighth line from the bottom, there was an error of "one-third"—it should have read two-thirds—"of a vacuum," &c.; the meaning, perhaps, was sufficiently apparent by the annexed numerical expression—"10 lbs. effective pressure;" but, to prevent any mean or unfair handling, I have desired thus soon and more explicitly to be my own corrector of the error. Intruding more considerably, the extraordinary speed recently obtained on the Croydon line must for ever set at rest those doubts, signified by Mr. R. Stephenson and others before the Parliamentary committee of last year, as to the applicability of the atmospheric system to high velocities; and that there were inherent natural obstacles in the movement of air, &c., which forbade even approach to what has lately been by actual practice proved. We have an instance of four carriages, including the piston carriage, weighing about 22 or 23 tons, reaching, over a distance of a quarter of a mile, the speed of 75 miles per hour, and, during the same trip, varying velocities of 60, 64, and 69 miles. There is one defect, connected with the atmospheric railway, which, though it is capable of remedy, requires some consideration as to the means; it is the frequently varying speed obtained during a journey over a section, due to irregular leakage, &c., and action of the pumps; it would appear as if control ought to rest rather with the man in attendance on the piston carriage, than the stationary engine-driver—there wants a more ready means of communication between the two; this asserts nothing against the system, but only presents a field for simple mechanical exercise to render it improved or perfect. The action of the valve-break might be made more immediate, presuming an obstruction to occur at the commencement of a section, when the mere rush of air through so small an opening would evidently consume much time in degenerating the large capacity of vacuum, and extreme speed throughout the line checked, as well as increased regularity procured, by providing the piston carriage with a small vertical slide not necessarily touching, but partially, more or less as at pleasure, covering (worked by the man in attendance) the opening through the valve at the back of the piston, so as to check the full impingement of the atmosphere, and in working expansively the after column—which would be the case if the area of the opening be less than that of the piston, and the end of the tube be not exposed to the air—a greater amount of regulation or control would, by this means, reside in the power of the attendant on the train. Its applicability as a break, affording at least an auxiliary to the present one, is apparent. The idea is original to myself; but there have been a multiplicity of atmospheric schemes, that it probably may have occurred to others. I have, however, selected your medium as a means of making it known, I hit upon the one most prominent to suggest a consideration of its merits, and of satisfying the only possible object there can be in my communicating it.—CANDOUR: London, August 31.

THE ELECTRIC TELEGRAPH.

SIR.—It would be difficult to determine what is meant to be implied in a paragraph in your last, announcing a discovery of Professor Stenheil, of Munich, who, it is said, has applied to the electric telegraph on the Munich and Augsburg Railroad, a "coating" which serves as a protection from lightning! This can only mean, that the material employed is an electric or non-conductor, which is the character of resins, balsams, &c.; but non-conductors, while they may insulate the wire or wires within, and secure them from atmospheric influences, have no power whatever to prevent the destructive and attractive agency of lightning—a coating of soluble glass (silicated potassa), would be the best possible available material. Gum lac ranks first in the list of electrics. J. MURRAY.

Portland-place, Hull, Aug. 31.

IMPROVEMENTS IN LOCOMOTIVE ENGINES.—Messrs. G. Stephenson and W. Howe's improvement in locomotive steam-engines consists in the application of three steam cylinders to locomotive engines—two to be of the same diameter and capacity, and together to be equal in capacity to one large cylinder. The pistons of all the three cylinders are to move simultaneously in the same direction; the large cylinder is to be placed exactly in the longitudinal central line of the engine, and the other two cylinders on each side at equal distances from it. The piston of the centre cylinder is to drive a crank on the axle of the impelling wheels, and the pistons of the two smaller cylinders are to be connected with crank-pins fixed on the axes of the driving wheels; the crank to be fixed at right angles to the crank-pins. The intention of this arrangement is to neutralise any tendency that the oblique action of the connecting-rods on their crank-pins may have to produce a lateral vibration on the supporting springs of a locomotive when travelling very rapidly.

CANAL AND RIVER NAVIGATION.—A new method of propelling canal boats has been recently patented, which consists of a combination of steam-power and warping. In the middle of a flat-bottomed barge, with rudder at both ends (Janus fashion), there is placed a steam-engine, which causes two rollers or drums, fixed in bearings at opposite ends of the vessel, to revolve; these are alternately employed to wind upon a wire rope, either laid at the bottom of the canal attached to moorings, or fixed to posts at the side. Experiments were recently made at the Maida-hill tunnel, and were quite successful. The steam-tug drew at a speed of nearly six miles an hour several heavily laden barges, without causing any greater swell than that usually occasioned by the passage of a single barge. To all interested in canals, this discovery is of the utmost importance, since the extension of railroads threatens to render canals almost useless, it being impossible for animal power successfully to compete with steam, and the common steam-tug, with paddles, being unavailable for the purpose, on account of the great swell they cause destroying the banks.

RAILWAY SAFETY BUFFER.—Mr. E. Chesshire's (Birmingham) improvements in apparatus to be applied to railway carriages, to reduce the prejudicial effects of collision to passengers in railway carriages, consist simply of a strong straight inflexible rod of either iron or wood, or both combined, placed longitudinally under the centre of the carriages; the ends of the rods are to have enlarged heads, and the length of the rod to be somewhat less than the carriage, to which it is attached, and the buffers when in ordinary contact. This rod, which the inventor calls a "safety buffer," is not intended to have any effect in stopping the motion of the train in the usual manner, but only when a violent collision, either before or behind, occurs—then the heads of all the bars will be brought into contact, and "form one straight, inflexible, unyielding bar," by which means the effect of the collision will be neutralised.

NEW RAILWAY SIGNAL.—A new railway signal, intended to afford a certain and speedy mode of communication between the guard and driver of a train, was tried on the Eastern Counties Railway, on Tuesday, during a trip from London to Romford. A party of gentlemen connected with various railway companies, and otherwise interested in railway travelling, assembled on the invitation of Mr. J. H. Dutton, the patentee, at the Shoreditch terminus, where the nature of the invention was explained to them. The proposed contrivance is simple enough, consisting of a small copper tube, about 1 in. in diameter, attached to the bottom of the engine and each carriage in the train. On the engine, and on each carriage where a guard is seated, an upright tube supplied with a small brass whistle and mouth-piece, communicates with the longitudinal one beneath. The action may be thus explained:—A train consisting of 12 carriages would probably have two guards, one stationed on the last carriage, and one about the middle of the train. The guard on the last carriage wishes to bring the train to a sudden stand, for this purpose he blows through the mouth-piece attached to his upright tube, taking care at the same time, by raising a small brass lever, to render quiescent the action of his own whistle. The attention of the driver and the second guard is immediately arrested by the sound of the whistles attached to their respective tubes, the steam is shut off, the breaks applied, and the train stopped. The chief advantage which Mr. Dutton's inventions appears to possess over others of a somewhat similar nature which have preceded it, is the placing the whistle at the extremity of the tube, instead of near the mouthpiece, through which the air enters. By this arrangement the sound is preserved, and heard very plainly by the parties to whom it is addressed, even when a train is at full speed. The trial was with a train of 12 carriages; and we believe, the experiment was considered, so far as it went, perfectly satisfactory. The break between the carriages is supplied by an elastic wire and India-rubber tube, which is fitted and detached with great facility. The expense of the signal, Mr. Dutton states, will not exceed 30s. per carriage.—[This invention, we find, is claimed by Mr. John Goldring, of Chichester, who published a description of it in the *Spectator*, on the 20th Sept., 1845, and transmitted a copy to the Board of Trade, which was by them duly acknowledged: this "appropriation" is unworthy, and requires explanation from Mr. J. H. Dutton.]

ELECTRIC LAMP.—Mr. W. Greener, of Birmingham, has patented an improved means of ignition and illumination: the patentee describes his invention as being for the purpose of effecting illumination of public and private buildings, streets, &c., by means of solid or hollow prisms or cylinders of carbon (purified from impurities), or rods or strips of platinum, or other difficult fusible metal, enclosed in transparent air-tight vessels, and rendered luminous by passing currents of electricity; the carbon or metal is to be divided on the surface into numerous acute points. Hollow cylinders of carbon may be used, partially inserted within, and placed in perfect contact with hollow cones of platinum, either plain or acuminated, and enclosed as before described.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Twelfth clock.	
Bank Stock, 7 per Cent. 189 10	Belgian Bonds, 4 1/2 per Cent. 99
3 per Cent. Reduced Ann. 104 1/2	Dutch, 2 1/2 per Cent. 100
3 per Cent. Consols Ann. 96 1/2	Brazilian, 5 per Cent. 89
3 per Cent. Ann. 96 1/2	Chilian, 6 per Cent. 100
3 per Cent. Ann. 96 1/2	Mexican, 6 per Cent. 100 1/2
Long Annuit. 104 1/2	Spanish, 5 per Cent. 100 1/2
India Stock, 10 1/2 per Cent. 390	Portuguese, 4 per Cent. 100 1/2
3 per Cent. Consols for Acc. 96 1/2	Russian, 5 per Cent. 111 1/2
Exchange Bills, 1000s; 18 20 17 pm.	

RAILWAYS.—Notwithstanding the easy state of money—it being with difficulty lent at 2 per cent. on the Stock Exchange—there is not the slightest symptom of speculation in the share market. This is a somewhat striking feature, and shows more than anything else the true character of the apparent abundance. If the money which now presses for employment were of that character that really sought a beneficial, permanent investment, it would be impossible that the share market should continue so much neglected, while such low rates of interest are accepted. These facts furnish satisfactory evidence, that the capital now pressing on the market seeks only a temporary employment, and is already permanently assigned to a specific purpose. The stock and share markets have presented a rather deserted appearance during the week, as many of the sporting members are now enjoying a relaxation in the country, and the birds, are now winging, with their dog and gun, in preference to the turmoil of the City. The trifling business done in shares has been chiefly confined to scrip of lines guaranteed, or where the guarantee is expected—whilst the shares of old companies may be considered almost entirely neglected. The railway speculation mania is now defunct.

MEETINGS.—The following meetings have been held since our last:—LONDON AND SOUTH WESTERN: on Saturday, the half-yearly meeting of this company was held at the Nine Elms: there was a very crowded attendance. The report announced that, in submitting the usual half-yearly accounts, the directors had the satisfaction of informing the shareholders that, although important reductions were made in the charges for passengers and goods, and without the opening of any additional lines, the receipts of the six months present an increase, over those of the corresponding period of last year, of 11,017; the gross income of the six months amounts to 183,256; the gross expenses (including interest on borrowed capital) amount to 95,209;—showing a balance of 87,989. A dividend of 11. 17s. 6d. per share was declared, which will leave a surplus of 1004. 5s. applicable to the services of the current half-year—the warrants for which were issued on Monday last. The report was adopted. The meeting was afterwards made special, for the purpose of considering a proposal which had been made by the Richmond Company, to purchase their line. The terms asked by them were 10l. premium on 10l. paid, and call of 5l. now nearly due,—or the option of taking one South Western share for every three Richmond, on 15l. paid. The terms were unanimously agreed to, and the proprietors of the Richmond are to have until the 1st of October, to make up their minds as to whether they will accept the offer of the South Western, or the 10l. premium, in exchange for their shares. SOUTH DEVON: on the same day, the fifth half-yearly meeting of this company was held at Plymouth, and was numerously attended. The first trustee accounts of the company since the opening of the line, on the 29th of May, to the 30th June, left a balance of 1965l. in their favour.—MANCHESTER AND SOUTHAMPTON: on Tuesday, a numerous meeting of the inhabitants took place at Andover, for the purpose of considering the propriety of renewing the application to Parliament next session, for power to make this line, as proposed by the company, when the resolution to that effect was unanimously adopted.—EDINBURGH AND NORTH: on Monday, the ordinary general meeting of this company was held at Edinburgh; when it was announced that, after paying Parliamentary expenses, works, locomotives, salaries, &c., up to the 31st July, there remained a balance in hand of 1738. 10s.—Glasgow and North: on Wednesday, a meeting of shareholders at the London Tavern, to receive a report from the committee of inquiry, appointed at the general meeting on the 1st of August. The attendance was very numerous, the report was read with loud applause, a finance committee appointed, and a subscription of 1s. per share was agreed to, for defraying the expenses attending the recovery of the deposits.—BUCKINGHAMSHIRE: the report of the directors of the first ordinary meeting of this company announces that there is a balance in hand of 153,649l.—WATERFORD AND LIMERICK: the report communicated at the half-yearly meeting of the company, on this line, state that the engineer has given an estimate of the probable cost of the line from Limerick to Tipperary, a distance of 25 miles, which, in the present forward state of the works, is accurately calculated at 249,650l.—WOLVERHAMPTON, TENDRY, AND LUDLOW: on Wednesday, an adjourned meeting of the scripholders in this undertaking was held at the London Tavern, for the twofold purpose of recording the votes of the shareholders for or against a dissolution of the company, and for receiving the report of a committee, appointed to inquire into the financial affairs. The registration of scrip was proceeded with—when there appeared 503 votes for dissolving the company, and against it 2035. The report was then read, entering very fully into the monetary state of the company, the arrangements they had made, and the number of shares paid up, as well as those still due. After a desultory conversation, it was unanimously agreed, that the gentlemen who had formed the committee of investigation should form a sub-committee to co-operate with the directors. Mr. Baines bore witness to the great care and attention which they had exhibited with respect to the melancholy affair of Capt. Richardson, and the laborious and pains-taking manner in which the committee of investigation had discharged their task—in the prosecution of which they had given up every document and scrap of paper in their possession, which could throw any light upon the affairs of the company. The report was adopted, and the meeting separated.

DIRECT LONDON AND PORTSMOUTH: on Thursday, the first general meeting was held at the London Tavern. The directors' report stated, that an agreement had been made for an amalgamation with the Brighton and South Coast, which was submitted to the meeting. The accounts showed a balance in hand of 43,600l. 0s. 7d. The report was adopted, and the amalgamation sanctioned. They voted 1200l. to the directors for their past services, and 1900l. for their future services, till the amalgamation shall be completed.—GREAT EASTERN AND WESTERN: a meeting of dissentient scripholders was also held at the same tavern, when, after several rather violent speeches, a committee was unanimously appointed, for the purpose of protecting the interests of the scripholders, and who would call another meeting for dissolution, as soon as practicable.—Bristol and Exeter: on Tuesday, the twentieth half-yearly meeting was held at Bristol. The directors' report stated, that the sum 1200l. to the company by the Great Western for the half-yearly interest on 13th June last, is—rent of line from Bristol to Exeter, 35,370l. 10s.; share of toll for passengers, 8542. 17s. 9d.; ditto on merchandise, 2241. 17s. 10d.; total, 36,763. 5s. 7d. There is a clear disposable balance of 23,196l. 17s. 10d., which will allow a dividend of 10l. per 100l. share (free of income tax), payable, as usual, at the end of October. The directors proposed that the half-year for the dividend shall in future expire from the 6th of April and 6th of Oct. to the 30th June and 31st Dec. The Cornwall Railway having received the Royal assent, this line, with the West Cornwall and South Devon lines, secures a continuous broad gauge communication from the metropolis to the most western part of the kingdom. The balance in the bankers' hands on the 30th of June was 40,284l. 11s. 6d. The report was adopted, and the various resolutions and recommendations, authorised by the shareholders, were carried.—SOUTH STAFFORDSHIRE JUNCTION: the first meeting was held the same day at Wolverhampton. The main purpose of the meeting was to consider the propriety of consolidating an arrangement for an amalgamation with the Trent Valley Midlands. They had a balance in hand of between 30,000l. and 400,000l., which would prevent the necessity of their making any call at present, and when made they would not be very heavy. A resolution was passed, ratifying the said amalgamation, and it was afterwards announced, that the capital of the company, which originally stood at 750,000l., would, by the Act of Incorporation, be reduced to 525,000l. The present holder of fifty 25s. shares would be entitled to fifty 12s. 6d. shares in the new company.—WOLVERHAMPTON AND SOUTH STAFFORDSHIRE: the first general meeting of the shareholders of this company was held on the same day, at Wolverhampton, for the purpose of proposing an amalgamation with the Shrewsbury and Birmingham Company—the two companies taking due proportion of the capital required (500,000l.), being half the total authorised to be raised for the Shrewsbury and Wolverhampton line. The proposal for amalgamation was carried, and also an empowering the directors to carry out this purpose.—BIRMINGHAM, WOLVERHAMPTON, AND STOUR VALLEY: the first general meeting was held at Birmingham, when the chairman intimated that it was proposed, when the line was completed, that it should be worked by the London and Birmingham Company. Resolutions were passed, allowing the committee 600l. for their services during the past year, and a similar sum for next year.—WINDSOR, SLOUGH, AND STAINES ATMOSPHERIC (amalgamation with the South-Western Railway): a meeting of this company was held on Wednesday last, the 2d instant, when a report was presented from the committee, detailing the various negotiations, and proposing that a new company be formed by an amalgamation of the Windsor, &c., and the Staines and Richmond, in conjunction with the South-Western—the directors of which are to be appointed according to the capital represented. The Windsor capital to be considered as 150,000l., and the Staines and Richmond as 200,000l. The South-Western Company is to receive the line at a rental of 14s. per acre, and the London outlay (including the expenses hitherto incurred), and half the profits, with an option to purchase. The report was received, and a provisional committee appointed.

ELY AND BURY ST. EDMUNDS: a meeting of the shareholders was held on Thursday, at No. 7, Millbank-street, Westminster, for the purpose of considering the propriety of dissolving the company. Scrip was represented to the amount of 4507, all of which was in favour of winding up. The balance-sheet gave a returnable dividend of 17. per share, after deducting the incidental expenses of law costs, engineering, &c. The report also stated, that the solicitors' bills amounted to 5921s. 8s. 10d., out of which three were assigned to a deduction of 2500l. 18s. 11d. HARTLEY RAILWAY: a general meeting of this company was to have taken place yesterday, but the report was informed there would be no meeting, and that the time when it would be held was uncertain.—LONDON AND BIRMINGHAM EXTENSION (Northampton, Daventry, Leamington, and Warwick): a meeting was held yesterday, at the Hall of Commerce, in pursuance of a requisition which had been advertised, for the purpose of determining whether the partnership or company formed, or intended to be formed, should be dissolved, and in what manner the affairs of the said company should be wound up; Mr. Powell in the chair. After an irregular discussion, scrutineers were appointed, for the purpose of ascertaining whether a sufficient number of votes were present. It was then moved and seconded, that the company should be dissolved, but that the dissolution should not be considered as an act of bankruptcy. After some considerable lapse of time, the scrutineers reported that there were 4636 votes present, the whole of that number voting for the dissolution; and that 110 voted for its being an act of bankruptcy—4321 against it, and 205 were neutral. There not being a sufficient number of votes present to constitute a meeting, they adjourned to Thursday next.—WARWICK AND WORCESTER: a meeting was also held at the same place, in consequence of a similar requisition. Mr. Lewis Davis in the chair. Scrutineers having been appointed, it was moved and seconded, that the company should be dissolved; and afterwards moved and seconded, "that dissolution should be considered as an act of bankruptcy." Upon these motions, the scrutineers proceeded to take the votes: the numbers for the dissolution were 2269, against it none; in favour of its being considered an act of bankruptcy 400, and 1180 against it. There not being a sufficient number of votes to constitute a meeting that could adopt a resolution for the dissolution, it was adjourned to Thursday next. A protest was put in against the meeting, on the ground that the notices in the *Gazette* were contrary to the provisions of the Act of Parliament, this company having amalgamated with other companies.—JAMARCA SOUTH MIDLAND JUNCTION: a special general meeting was held at their offices, Essex-street, Strand, yesterday, for the purpose of receiving the report of the directors, which stated, that there had been considerable increase in the number of signatures to the deed, which now amounted to 10,315, more than half of the total required; and the bill had received the Royal assent, and, therefore, the company was legally constituted. The line was now 45 miles in length, and the total estimated cost was 336,695l., to which there had been added engineering contingencies 10 per cent. It appeared that the line might be worked for 20,000l. annually, but, in consequence of the depressed state of the market, the directors thought it would be better not to proceed further at present with the works, than to make that nominal commencement which was required by the Act of Assembly. The balance in hand was 16,116l. 19s. 11d., which was placed at interest; and they were ready to give the shareholders, who desired to retire, 13s. 6d. per share. The resolutions were carried, and carried unanimously, and a vote of thanks passed to the chairman.

SCOTCH RAILWAYS.—Several important meetings have recently taken place, and many important arrangements resolved on. Of these, the SCOTCH CENTRAL, for the execution of its branches, is to take up 170,000l. in 6800 new shares, which are to be issued at par in the proportions of one share of the shares now in existence. The holders of the scrip last issued, to entitle them to this bonus are required to register, and to pay up 10l. per share before 3d November.—The EDINBURGH AND NORTH, instead of a separate entrance to Perth, join the Scotch Central at the southern extremity of their tunnel, paying them a four miles rate for its use—a desirable arrangement for both undertakings.—The SCOTCH MIDLAND are to form a valuable branch to Dundee and Blair Athol; but, until their main line is somewhat nearer conclusion, delay any arrangement for its formation.—The DUNDEE AND PERTH have acquired the property of Barnhill on the Tay, opposite Perth, and expect, before Christmas, to open their line to that point. The bridge across the Tay, and the junction with the foregoing three lines at the general terminus (now fixed to the east side of the town of Perth), will be matter for future arrangement, and will require additional capital—probably 100,000l.—The CALEDONIAN have amalgamated with the Clydehead Junction, and purchased the Gairnkrick—both of them beneficial arrangements; 4s. per cent. is to be allowed from 1st October next on all calls, whether paid or due or paid in advance. The reports of the progress of the works made at all these meetings were most satisfactory, notwithstanding the ruinously wet weather we have recently been visited with.—The NORTH BRITISH are to raise 600,000l. additional capital, for the formation of new branches, but this will probably not be done until the whole of the Carlioles are called up; the proprietors having resolved that these shall be retained as full shares, as originally contemplated; they have also refused to sanction the amalgamation with the Edinburgh and Perth scheme, as undertaken by the directors.

The meeting of the EDINBURGH AND GLASGOW RAILWAY took place (on Tuesday), at Glasgow, John Learmonth, Esq., in the chair. From the report, it appeared that the directors' estimate for the half-year exhibited an increase of 16,904l. 1s. 6d., compared with the corresponding period of last year, and that after paying all expenses, interest, &c., the sum on hand, applicable to a dividend, was 49,816. 2s. Out of this, the directors recommended a dividend at the rate of 6 per cent. per annum, to be paid on Tuesday, the 22nd day of September, amounting to 48,375l. 10s., being an increase of 13,937l. 10s. upon the amount of the dividend paid in September, 1845. After the reading of the report, the chairman moved its adoption in a speech of some length. Mr. Cheetham (a Manchester shareholder) replied to the chairman, and moved, as an amendment, that the report be not received or adopted. This gave rise to a discussion, in which gentlemen from England, and Scotch shareholders, took part. The main question before the meeting being, whether or not the amalgamation of the company with the Perth and Clyde and Union canals should be approved: The English shareholders were altogether opposed to the amalgamation—and insisted that, because of the conduct of the directors in that matter, they were unworthy of the future confidence of the company. An amendment, proposing an adjournment for a fortnight, was negatived by 5542 votes to 1313; and Mr. Cheetham's amendment was held to be carried by the same majority. The meeting then broke up.

During the past month, the Aberdeen, Banff and Elgin has tendered the repayment of 19s. 6d. out of 50s., a sum which many of the scripholders have refused: the Inverness and Elgin do little better, by offering 17s. 6d. as an *ad interim* payment, out of 40s.—two instances in strong contrast with the great North of Scotland Extension, the directors of which have now repaid the whole deposits in full. The Arran and Galloway repay 25s. out of 50s., retaining the other half with the intention of going to Parliament again next session; the Perth and Inverness make an interim payment of 30s.; and the Caledonian North Direct return 43s. out of 50s. The promised repayments by the Dundee and Perth Extension, and the Glasgow and Dundee, have not yet been made; that by the latter being, 'tis said, now somewhat doubtful. Of the expected repayment of the Stirling and Dunfermline deposits, alluded to in our last month's circular, we have received the following explanation from the secretary of the Edinburgh and Glasgow Railway:—The facts are simply these:—Previous to the meeting of the Stirling and Dunfermline shareholders, on 11th May last, to decide upon the winding up, or proceeding with the undertaking, the Edinburgh and Glasgow Company purchased a certain amount of scrip from various parties, giving 35s. and a guarantee of 5s. additional per share, in the event of the bill receiving the sanction of Parliament this session; and public notice was given in the Glasgow papers, that, up to a fixed date anterior to the meeting, scrip would be taken up on these terms, from all parties who chose to send it, until the company had obtained such quantity as they required. A number of parties took advantage of this offer, and those who did so are alone entitled to the benefit of the agreement referred to. It was only the scrip which this company had in their possession at the meeting of 11th May, which could be of any use to them.

LEEDS, THURSDAY.—There has been an average amount of business done during the week, and prices have been, on the whole, well supported; the reduction in the Bank rates, combined with the favourable harvest weather, may be expected to keep stock firm at present rates. Leeds and Bradford have struggled, and are now at 34. per ton. Leeds and Thirsk are steady at 34. dis.; Leeds, Wakefield, and Midland, under expectation of arrangements being concluded with the Midland Company, have run up to 10s. dis.

HULL, THURSDAY.—The market, since our last, has been steady, but quiet. The second report of Mr. Morrison's committee is useful for reference. Meddling, however, with the financial arrangement of companies, issues of new shares, and fixing terms of years, is not exactly proved desirable, because they do so in France. The enforcement of low fares, and the prevention of accidents, should, perhaps, form the limit of interference. To compel the companies to charge low rates, would most likely prove for their own benefit, and increase their own receipts; and as to accidents, no regulations—Government or otherwise—can be so stringent. There was, perhaps, less disposition to buy at our market this morning—certain stocks, however, are good; among them, Ormskirks and Darwens—Taworths, West Ridings, and North Westerns, are flatter.

WEST INDIA MAIL.—The *Dee* steamer arrived at Southampton yesterday; she has on freight 8252,040, 17,708 oz. silver, 667 oz. gold, 37 oz. of gold and silver amalgam, 440 oz. gold dust, 625 francs, and 10357. silver coin, besides a miscellaneous cargo. The latest dates are:—From Tampico, July 22; Vera Cruz, Aug. 2; Havannah, Aug. 10; Nassau, Aug. 12; Bermuda, Aug. 20; Jamaica, Aug. 8; Demerara, Aug. 3; Trinidad, Aug. 6, and Barbadoes, Aug. 8.

RAILWAY TRAFFIC.—From our official returns, it appears that the amount of traffic for the last week, on nearly 1800 miles of railway, was 173,204l., thus accounted for—95,135l. for the conveyance of passengers only, 33,988l. for the carriage of goods, and a remainder of 44,081l. for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of 21,690l.—*Railway Chronicle*, of this day.

RAILWAY ACCIDENT INSURANCE COMPANY.—A company under this title has issued its prospectus in Paris, having for its object the indemnity of persons travelling by railway who should have met with accident thereby. According to the terms of the prospectus, the widow or the children of an insured, who should have met his death by railway accident, will be entitled to receive a life pension according to the premium paid.

IRISH RAILWAYS.—The Cashel Railway is to commence carrying the mail next week, and the number of trains will be increased to three per day from each terminus. The further formation is rapidly going forward. The Newry and Enniskillen have commenced work near Newry. The Dundalk and Enniskillen are busy near Castleblaney. The Dublin and Belfast Junction intend soon vastly extending their operations.

WIDENING OF THE GREENWICH RAILWAY.—The South-Eastern have determined that the extensive works for the widening of this branch line, which they obtained during the past session, shall be proceeded with. The works comprise another viaduct built on brick arches, the entire length of the Greenwich line, so as to provide for three additional lines of rails—one of which is for the atmospheric railway, and the other two for the North Kent line. Half the work, we are informed, is under contract, and the remainder will be let in the course of three weeks or a month. It is to be executed under the direction of Mr. P. W. Barlow, the company's acting engineer. The joint station at London-bridge is also to undergo important improvements, and to be enlarged to nearly twice its present dimensions. The contracts for widening the Greenwich line include the works at the station.

GRAVESEND AND ROCHESTER RAILWAY.—This line, in the hands of the South-Eastern Company, is about to undergo considerable improvement, by the introduction of a double instead of a single line as at present. For this purpose, works of some magnitude will be required, more particularly within the tunnel, where the canal must be filled up. On Tuesday, Mr. Stephenson, engineer of the South-Eastern, surveyed the line; and it is proposed to close it about the first week in November, in order to accomplish the work. Arrangements have been entered into with Messrs. Grissell and Peto for the purpose, and a great number of hands are to be employed, so as to insure its completion within a given time; and, under this arrangement, it is calculated that the traffic will not experience an interruption of more than six weeks. In connection with these works it is also intended to proceed immediately with the line from Woolwich to Gravesend; and those to Maidstone, Chatham, &c., will next engage the attention of the company.

MONSTER TRAIN.—A train of enormous length, consisting of 106 carriages, besides engine and tender, upwards of half a mile in length, was propelled by the Severn engine, on the Taft Vale Railway, one day last week—the weight of coal carried was 530 tons, to which add 266 tons for carriages, gives the weight of the train 798 tons.

COST OF RAILWAYS.—The following is the average cost per mile of some of the principal lines in this country:—

Albion and Forfar	29,214	London and South-Western	£28,000
Chester and Birkenhead	34,198	Manchester, Bolton, and Bury	70,000
Dublin and Drogheda	15,652	Manchester and Birmingham	61,624
Dublin and Kingstown	59,122	Manchester and Leeds	64,882
Dundee and Arbroath	8,570	Midland	30,498
Durham and Sunderland	14,281	Newcastle, Darlington, & Brundling	22,592
Edinburgh and Glasgow	35,024	Newcastle and Carlisle	17,837
Eastern Counties and North-Eastern	46,356	Newcastle and North Shields	44,335
Glasgow, Kilmarnock, and Ayr	20,607	Norfolk	13,150
Glasgow and Greenock	35,451	North Union and Bolton & Preston	27,799
Gravesend and Rochester	13,333	Preston and Wyre	22,261
Great Western	43,885	Sheffield and Manchester	48,428
Hartlepool	26,600	South-Eastern	44,412
London and Birmingham	38,400	Taft Vale	21,619
London and Blackwall	287,678	York	14,334
London and Brighton	56,981	Ulster and North Midland, &c.	25,924
London and Croydon	40,400		

The Ford Abbey Estate (advertised in our columns a few weeks since), together with the splendid monastery, was sold on Thursday at the Auction Mart, by Mr. George Robins, for 50,100 guineas; and Messrs. Osborne and Ward, of Bristol, the leading bankers of that city, it is believed, are the purchasers.

IRISH MARBLE.—The recent importation of green marble from Ireland was made on the recommendation of Prince Albert, who expressed his opinion, to a deputation of the council of the Society of Arts, of which he is president, of the applicability of the article (samples of which have been sent over for their official investigation) to various economical and ornamental purposes.

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